

Appointment

From: Dominguez, Alexander [dominguez.alexander@epa.gov]
Sent: 9/21/2017 3:32:44 PM
To: Dominguez, Alexander [dominguez.alexander@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Bolen, Brittany [bolen.brittany@epa.gov]; Kime, Robin [Kime.Robin@epa.gov]
Subject: Corn Refiners (biogenic co2)
Attachments: Biogenic CO2 Coalition Comments EPA Significance Rule (filed) (12-16-16)....pdf; Biogenic CO2 Coalition Overview .pdf; Biogenic CO2 Coalition Slides (9-21-16).pdf; Biogenic Letter to Administrator Pruitt.pdf; Biogenic CO2 Case Studies (4-14-16).pdf
Location: Conference Line: [Ex. 6 Personal Privacy (PP)] Passcode: [Ex. 6 Personal Privacy (PP)]
Start: 9/29/2017 4:30:00 PM
End: 9/29/2017 5:00:00 PM
Show Time As: Tentative

Conference Line: [Ex. 6 Personal Privacy (PP)]
Passcode: [Ex. 6 Personal Privacy (PP)]

Mandy will open the line

Rescheduled from Sept 20th.

From: Kyle Harris [mailto:kharris@corn.org]
Sent: Thursday, September 7, 2017 10:17 AM
To: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>
Cc: Dominguez, Alexander <dominguez.alexander@epa.gov>; Keniece Barbee <kbarbee@corn.org>
Subject: RE: Biogenic CO2
Importance: High

Mandy,

I hope you were able to enjoy the Labor Day Weekend.

Thanks again for meeting with us on July 26th, we thought it was a very productive meeting and hope to maintain an open dialogue with you moving forward.

We were hoping to get a follow up call with you and your core decision makers on the calendar in the coming weeks as we work towards a resolution to the biogenic issue. We participated in EPA's Science Advisory Board Public Meeting last week in Arlington. Through both written and verbal comments we stated the need to place short cycle agriculture biomass on a separate track from woody biomass. We continue to think that Biogenic CO2 from agriculture crops should not and is not properly regulated at this point in time.

We were hoping to get a follow up call with you and your core decision makers on the calendar in the coming weeks as we work towards a resolution to the biogenic issue.

Please do not hesitate to reach out to me should you need any further information or clarification.

Thanks in advance,

Kyle

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<image001.png>

December 16, 2016

VIA ELECTRONIC FILING

Hon. Gina McCarthy, Administrator
U.S. Environmental Protection Agency
c/o E-Docket ID No. EPA-HQ-OAR-2015-0355
William Jefferson Clinton Federal Building
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: Comments of the Biogenic CO₂ Coalition – EPA Proposed Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program, 81 Fed. Reg. 68110 (Oct. 3, 2016)

Dear Administrator McCarthy:

The Biogenic CO₂ Coalition (“Coalition”)¹ appreciates the opportunity to submit these comments on EPA’s proposed Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program, which the agency has proposed under the federal Clean Air Act (referred to herein as the “Significance Rule”).

The Coalition has previously commented on various EPA proposals to regulate greenhouse gases including, principally, EPA’s proposed Standards of Performance for Greenhouse Gas Emissions From Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 1430 (Jan. 8, 2014) (EPA-HQ-OAR-2013-0495) (“NSPS Rule”); Carbon Pollution Emission Guidelines for Existing Sources: Electric Utility Generating Units, 79 Fed. Reg. 34830 (June 18, 2014) (EPA-HQ-OAR-2013-0602) (“CPP Rule”); and Proposed Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated to Endanger Public Health and Welfare and Advance Notice of Proposed Rulemaking, 80 Fed. Reg. 37758 (July 1, 2015) (EPA-HQ-OAR-2014-0828) (“Aircraft Rule”). Our prior comments on all greenhouse gas regulatory policies are incorporated by reference herein. Our comments have concerned primarily the implications of EPA’s policy approach to “biogenic CO₂,” meaning carbon dioxide emitted from the processing or energy use of agricultural feedstocks.

¹ The Coalition consists of the following stakeholders: American Bakers Association, American Farm Bureau Federation, Corn Refiners Association, Enginuity Worldwide, National Corn Growers Association, National Cotton Council of America, National Cottonseed Products Association, National Oilseed Processors Association, and North American Millers’ Association.

The stakeholders represented by the Biogenic CO₂ Coalition grow or process various agricultural crops and farm products, typically short-cycle annual herbaceous crops and crop residues. Together with others in the agricultural community, and supported by federal and state agriculture departments, our members are investing billions of dollars in the “bioeconomy,” which promotes bioenergy technology and pioneering “green chemistry” approaches to produce food, fiber, consumer products, pharmaceuticals, bioplastics, biofuels, commercial chemicals, and a cornucopia of other bioproducts from crop-derived materials. The bioeconomy provides 21st century solutions to economic growth, domestic energy security, jobs, and environmental benefits in the form of bioenergy, biofuels, and bioproducts made from corn, oilseeds, crop residues, farm wastes and other agricultural feedstocks. America’s bioeconomy currently contributes \$393 billion in economic activity, provides 4.2 million American jobs, and is the leading source of domestic renewable energy in the United States. Importantly, the bioeconomy is poised to expand exponentially with the right policy environment. *See USDA, An Economic Impact Analysis of the U.S. Biobased Products Industry* (Oct. 2016) (the “2016 Biomass Report”).²

While providing food, fuel and fiber to American families, the bioeconomy also reduces CO₂ by 400 million tons every year through uptake of carbon by growing crops, thus playing a critical role in achieving climate policy goals.³ The benefits of agriculture as a renewable and sustainable resource are widely recognized, and the life-cycle carbon benefits of biogenic emissions from the use or processing of biomass have been universally acknowledged by policymakers and scientists.⁴

Members of the Biogenic CO₂ Coalition are eager to grow and expand the bioeconomy over the coming decades. Naturally, because bioproducts are made from carbon-based organic materials, some amount of carbon in those materials is cycled back into the atmosphere when agricultural feedstocks are used or processed by energy combustion, fermentation, or microbial wastewater treatment (referred to as “crop-derived CO₂” or “biogenic CO₂”). EPA’s current policies and regulations – which in some situations treat biogenic CO₂ the same as fossil fuels and essentially put a carbon tax on farm products – are thwarting investment in the bioeconomy. EPA has failed to put science first by failing to distinguish between fossil-based emissions, which EPA has said contribute to global warming, and crop-derived emissions, which are carbon neutral by nature. Instead of recognizing the natural life cycle of agricultural carbon, EPA instead has inadvisedly labeled biogenic CO₂ as a harmful pollutant under the Clean Air Act.

Farm feedstocks are not the same as fossil fuels or petrochemicals. To the contrary, American farmers growing crop-based feedstocks have already done the hard work of uptaking carbon from the atmosphere during the growth cycle. When agricultural feedstocks are used for energy, turned into bioproducts, or processed for food, fiber and fuel, the “biogenic” emissions from these processes are simply returning carbon to the atmosphere that farmers have already removed from the carbon cycle as part of the natural carbon flow. The science of life-cycle

² Available at www.biopreferred.gov/BPResources/files/BiobasedProductsEconomicAnalysis2016.pdf.

³ *See* 2016 Biomass Board Report at 6 (Feb. 2016).

⁴ *See* 2016 Biomass Board Report at 7 (“Biobased products . . . recycle carbon (CO₂) from the atmosphere, resulting in air quality improvements when compared to fossil fuel-based products”).

emissions shows that emissions of crop-derived CO₂ resulting from energy use or processing of crop-derived feedstocks are harmless from a global warming standpoint and do not contribute to elevated atmospheric concentrations of greenhouse gases. Until this basic science is embraced fully by Administration policy, the bioeconomy will be hobbled from achieving its full promise.

Accordingly, as part of its pending mandate from the Supreme Court to revisit its interpretation of the scope of greenhouse gas regulation under the Clean Air Act (discussed below), EPA should define key terms in its regulations to exclude carbon-neutral biogenic emissions. Similarly, in the context of the proposed Significance Rule, EPA must not deny the scientific reality of life-cycle emissions and should categorize agricultural biogenic emissions as insignificant or *de minimis* for purposes of the PSD and Title V programs, as well as other Clean Air Act programs and policies, including EPA's Clean Power Plan.

I. UNDER SUPREME COURT MANDATE, EPA MUST REVISIT ITS INTERPRETATION OF THE CLEAN AIR ACT AND SET DE MINIMIS LEVELS FOR "POLLUTANTS"

As EPA acknowledges in the preamble of the proposed Significance Rule,⁵ its proposal is a response to a series of federal court rulemaking challenges to EPA's greenhouse gas regulations, culminating in the U.S. Supreme Court's seminal decision in *Util. Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) ("*UARG*"), and the D.C. Circuit's amended judgment on remand from *UARG* in *Coalition for Responsible Regulation v. EPA*, No. 09-1322, 606 F. Appx 6, 8 (D.C. Cir. Apr. 4, 2015). These decisions vacated certain aspects of the Obama Administration's regulation of greenhouse gases under the PSD and Title V permitting programs and announced important principles of law, which EPA must now observe.⁶ In *UARG*, the Supreme Court explicitly recognized the agency's authority to establish significance (or *de minimis*) levels for regulated pollutants. *See, e.g., UARG*, 134 S. Ct. at 2449 ("EPA may establish an appropriate *de minimis* threshold . . . for a source's greenhouse-gas emissions"). Importantly, the Supreme Court also ruled that the agency's interpretation of the statutory term "pollutant" under the Clean Air Act is a context-specific definitional exercise and, as a corollary, directed EPA to interpret the statute in such a way as to give meaning to the context in which pollutants are identified or regulated. *See, e.g., UARG*, 134 S. Ct. at 2439 ("where the term 'air pollutant' appears in the Act's operative provisions, EPA has routinely given it a narrower, context-appropriate meaning").

The D.C. Circuit echoed this material aspect of the Supreme Court's opinion by ordering EPA to respect the Supreme Court's mandate and on remand "consider whether any further revisions to its regulations are appropriate in light of *Util. Air Regulatory Group v. EPA*, 134 S. Ct. 2427, 189 L. Ed. 2d 372, and if so, undertake to make such revisions."⁷ EPA has acknowledged

⁵ 81 Fed. Reg. at 68110-11.

⁶ The Supreme Court in *UARG* invalidated EPA's greenhouse gas program to the extent it required stationary sources to obtain permits solely because the sources emit or have the potential to emit greenhouse gases above applicable thresholds, thereby limiting the applicability of permitting to "anyway sources" that would be regulated under the permitting programs regardless of greenhouse gas emissions.

⁷ *Coal. for Responsible Regulation*, 606 F. Appx 6 at 8.

as much in the proposed rule.⁸ Because EPA is under a legal mandate to re-examine its existing policies and regulations affecting greenhouse gas emissions with a context-specific lens – a principle that applies equally to biogenic emissions – the Significance Rule should reflect this watershed directive from the Supreme Court and should establish once and for all an exemption for agricultural biogenic emissions.

Put another way, EPA must consider whether Congress would have intended that biogenic emissions be classified as a subset of the larger set of pollutants within the definition of “any air pollutant.” See *UARG*, 134 S. Ct. at 2448. As discussed below, due to the nature of biogenic emissions and their lack of harmful effect, EPA cannot properly interpret the term “air pollutant” to include biogenic emissions within the context of the Clean Air Act regulatory programs and EPA’s previous endangerment finding. As a corollary, if biogenic emissions are not properly interpreted as harmful pollutants under the category of “air pollutant,” then biogenic emissions would not be considered as “regulated” pollutants and should not be subjected to Clean Air Act programs such as PSD and Title V permitting programs.

A contrary interpretation would result in exactly the “enormous and transformative expansion in EPA’s regulatory authority without clear congressional authorization” that the Supreme Court sought to avoid in *UARG* by requiring EPA to re-visit its interpretation of “air pollutant” under the Clean Air Act statutory scheme. *UARG*, 134 S. Ct. at 2444, 2448. The agricultural community is legitimately concerned that EPA is using its current policy with regard to biogenic emissions as a basis for (1) regulating natural CO₂ from biological processes like bread baking, (2) attempting to define “sustainability” on the farm field, and (3) disqualifying agricultural feedstocks as low-carbon fuels under its Clean Power Plan. There is no indication in the Clean Air Act that Congress intended that EPA exercise this type of sweeping authority over agricultural production. See *UARG*, 134 S. Ct. at 2444 (courts should be skeptical “when an agency claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy”). The Supreme Court’s ruling in *Michigan v. EPA*, 135 S. Ct. 2699 (2015), is similarly instructive, in that the Court’s admonition that EPA cannot presume from Congressional silence an inability to consider economic ramifications would apply by the same logic to EPA’s apparent position that it can ignore the life-cycle science of biogenic emissions. As in the case of EPA’s overreach in regulating major sources of fossil emissions that was struck down in *UARG*, the concerns repeatedly raised by the agricultural community expressing alarm at the illogical impact of EPA’s regulation on farms and food processors “should have alerted EPA that it had taken a wrong interpretive turn” with respect to biogenic emissions. *UARG*, 134 S. Ct. at 2446.

Because EPA is proposing changes to the definition of “greenhouse gases” in the Significance Rule,⁹ EPA should take the opportunity to re-evaluate its interpretation of the Clean Air Act and endangerment finding based on an acknowledgment that biogenic emissions are part of the natural carbon flow cycle, and should clarify that its regulatory definitions exclude biogenic

⁸ 81 Fed. Reg. at 68112:1.

⁹ 81 Fed. Reg. at 68112.

emissions from those regulatory programs aimed at “harmful” pollution. Clarifying the limitations of EPA’s regulation will avoid an expansive interpretation of the Clean Air Act that would essentially put EPA in the position of regulating the entire agricultural sector, from growing crops on the farm field to baking bread.

Notwithstanding that EPA is under a mandate (issued nearly two years ago) to re-interpret the scope of its greenhouse gas program, the Significance Rule proposal does not currently address crop-derived biogenic CO₂ emissions. Nor has EPA proposed any separate significance level applicable specifically to biogenic emissions. EPA’s failure to respond to the Supreme Court’s mandate puts the agency in contempt of the D.C. Circuit’s explicit remand order and in contempt of the Supreme Court’s clear instructions. Unless EPA takes the actions described in these comments, including an exemption for agricultural biogenic emissions, EPA will not be able to “fully implement” the Court’s mandate as the agency admits that it must do.¹⁰ To the extent that EPA takes a second look at its prior positions concerning biogenic emissions under the *UARG* mandate and revises its flawed interpretive stance by appropriately exempting biogenic emissions, the agency may do so without re-publishing the Significance Rule for a further round of public comment under the Administrative Procedure Act, and therefore could include such an exemption in the final rule.¹¹

II. EPA MUST DISTINGUISH SCIENTIFICALLY BETWEEN BIOGENIC AND FOSSIL EMISSIONS

In its various greenhouse gas regulations applicable to stationary sources, EPA failed to recognize the scientific distinction between CO₂ emissions from biogenic sources, such as annual agricultural crop feedstocks, and fossil-based emissions from combustion of fossil fuels. The basic science of carbon life-cycle analysis establishes that crop-based biogenic emissions are part of the natural carbon “flow,” which is part of the natural biological stocks of carbon in the world’s climate system.¹² In other words, biogenic CO₂ is part of the baseline of roughly 280 parts per million (ppm) of pre-industrial atmospheric CO₂ that is essential for a stable climate and life on Earth.

Under the Clean Air Act, EPA may regulate greenhouse gases from stationary sources only if such sources cause or contribute to “air pollution which may reasonably be anticipated to endanger public health or welfare.”¹³ In its 2009 Endangerment Finding, EPA identified “elevated” levels of CO₂ in the atmosphere, in other words, excess levels above the natural pre-industrial baseline, as the harmful pollutant endangering the environment.¹⁴ However, as

¹⁰ 81 Fed. Reg. at 68112.

¹¹ See *Perez v. Mortgage Bankers Ass’n*, 135 S. Ct. 1199 (2015) (interpretative rules, even changes to previous definitive positions, are not subject to APA informal rulemaking procedures).

¹² See, e.g., Seungdo Kim, Ph.D and Bruce E. Dale, Ph.D, *The Biogenic Carbon Cycle in Annual Crop-Based Products*, Michigan State University (Nov. 22, 2013) (available at www.biogenicCO2.com).

¹³ Clean Air Act § 111(b)(1)(A), 42 U.S.C. § 7411(b)(1)(A).

¹⁴ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496, 66516 (Dec. 15, 2009) (the “2009 Endangerment Finding”) (“The Administrator finds

discussed below, biogenic CO₂ is part of the baseline of natural flows of carbon dioxide, not excess to the baseline.

Despite this indisputable science, EPA has in a number of settings entirely refused to recognize life-cycle science. For example, in guidance applicable to the PSD and Title V program, Assistant Administrator Janet McCabe stated that “EPA plans to propose revisions to the PSD rules to include an exemption for the [BACT] requirement for GHGs from waste-derived feedstocks and from non-waste biogenic feedstocks derived from sustainable forest or agricultural practices . . . if the applicant can demonstrate that these feedstocks in fact come from sustainably managed lands . . . all other biogenic feedstocks . . . would remain subject to the GHG BACT requirement at this time”¹⁵ This rather backhand phrasing in the McCabe memo means from a legal perspective that biogenic CO₂ emissions are viewed by EPA as harmful pollutants that cause climate change. Similarly, in its controversial Clean Power Plan, EPA again treated biogenic CO₂ from agricultural feedstocks the same as fossil fuels by disqualifying biomass energy feedstocks as low-carbon fuels unless producers meet certain “sustainability” criteria. These phantom criteria, which are nowhere defined in the Clean Power Plan rulemaking and which appear nowhere in the statutory text of the Clean Air Act as authored by Congress, are inscrutable and unworkable, and again assume that biogenic CO₂ is a harmful pollutant.¹⁶ Most recently, EPA stated in its August 2016 final Aircraft Rule in stark categorical terms that “there is no distinction between biogenic and non-biogenic CO₂.”¹⁷

EPA never did propose an exemption for waste-derived or sustainable agricultural feedstocks as it signaled in the 2014 McCabe Memo, nor has it acknowledged the life-cycle carbon neutrality of crop-derived biogenic CO₂ emissions. Rather, the agency has continued to take the position that all biogenic CO₂ from agricultural processes will be regulated as if those emissions were from combustion of fossil fuels. This position has created paralyzing uncertainty in the context of facility permitting in the bioeconomy, as stakeholders have no idea how biogenic CO₂ will be treated in the regulatory context. Many proposed projects, involving millions of investment dollars and hundreds of American jobs, have been unable to proceed in the face of such uncertainty and attendant litigation risk, and the few that have gone forward have bogged down in years of

that *elevated* concentrations of greenhouse gases in the atmosphere may reasonably be anticipated to endanger the public health and to endanger the public welfare of current and future generations.”) (emphasis added).

¹⁵ See Janet McCabe, Assistant Administrator, *Addressing Biogenic Carbon Dioxide Emissions from Stationary Sources*, dated Nov. 19, 2014 (“McCabe Memo”), posted at [http://www.epa.gov/climatechange/downloads/Biogenic-CO₂-Emissions-Memo-111914.pdf](http://www.epa.gov/climatechange/downloads/Biogenic-CO2-Emissions-Memo-111914.pdf).

¹⁶ See *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule*, 80 Fed. Reg. 64662, 64886 (Oct. 23, 2015) (“Given the importance of sustainable land management in achieving the carbon goals of the President’s Climate Action Plan, sustainably-derived agricultural and forest biomass feedstocks may also be acceptable as qualified biomass in a state plan, if the state-supplied analysis of proposed qualified feedstocks or feedstock categories can adequately demonstrate that such feedstocks or feedstock categories appropriately control increases of CO₂ levels in the atmosphere and can adequately monitor and verify feedstock sources and related sustainability practices.”).

¹⁷ *Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare*, 81 Fed. Reg. 54422 (Aug. 15, 2016).

litigation.¹⁸ All of this has a stultifying effect on investment in the bioeconomy and rural development.

EPA’s policy toward biogenic CO₂, and the unjustified burden placed on the agricultural sector, is not only misguided policy, it is illegal for several reasons. First, as described at greater length below, EPA has never completed an endangerment finding for biogenic CO₂, which is a prerequisite under the Clean Air Act for regulation as a pollutant. Accordingly, EPA should interpret its previous endangerment findings as having excluded biogenic emissions such that biogenic emissions from agricultural sources are not subject to regulation. Second, even if EPA had included biogenic emissions in its endangerment finding (which it did not), science supports a policy determination that biogenic emissions are insignificant and harmless from a global warming perspective. EPA’s failure over the last half decade to acknowledge life-cycle science and its attempt to exert regulatory power over the agricultural system is without precedent and *ultra vires*. Notwithstanding the legal deficiencies in EPA’s existing policies, the situation can readily be resolved by providing a *de minimis* determination for crop-derived biogenic CO₂ emissions in the Significance Rule.

III. EPA HAS NOT MADE AN ENDANGERMENT FINDING WITH RESPECT TO BIOGENIC CO₂ EMISSIONS

Prior to regulating emissions as pollution under the Clean Air Act, EPA must determine that the air emission at issue “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”¹⁹ In its 2009 Endangerment Finding for greenhouse gases from motor vehicles, EPA determined that “*elevated* concentrations of greenhouse gases in the atmosphere may reasonably be anticipated to endanger the public health and to endanger the public welfare of current and future generations.”²⁰ However, nowhere in this 2009 rulemaking did EPA study and determine with any acceptable level of scientific detail the effect of biogenic emissions on climate change or whether biogenic emissions properly should be considered a harmful pollutant under the Clean Air Act. As noted, biogenic emissions are part of the baseline levels of CO₂ that are necessary for life on Earth, not part of any “elevated” levels ascribed to emissions from fossil fuels.

A. EPA Must Distinguish Between Biogenic and Fossil Emissions In Terms of Contribution to “Elevated” Concentrations of Greenhouse Gas

The Clean Air Act and supporting case law provide EPA clear legal authority to distinguish between biogenic CO₂ emissions and greenhouse gas emissions from other sources such as fossil

¹⁸ See, e.g., *Helping Hand Tools v. United States EPA*, 836 F.3d 999 (9th Cir. 2016) (multi-year litigation over whether facility must burn natural gas instead of biomass for electricity on the basis of opponents’ denial of the science of life-cycle emissions).

¹⁹ See, e.g., 42 U.S.C. § 7411(b)(1)(A); see also *National Asphalt Pavement Ass’n v. Train*, 539 F.2d 775, 783 (D.C. Cir. 1976).

²⁰ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule, 74 Fed. Reg. 66496, 66516 (Dec. 15, 2009) (emphasis added).

fuel combustion. Congress granted authority to EPA to regulate only those emissions that endanger the environment (*i.e.*, harmful emissions) as stationary source pollutants. Unlike CO₂ emissions from fossil sources, biogenic CO₂ emissions do not increase net atmospheric levels of CO₂.²¹ EPA lacks the authority to regulate biogenic CO₂ emissions under the Clean Air Act because biogenic emissions do not adversely affect the environment. But even if EPA had the authority to regulate biogenic CO₂ emissions, it has significant discretion to exclude or provide different treatment for such emissions.

EPA itself has recognized in other contexts the lack of any adverse effect from agricultural biogenic CO₂ emissions. For example, EPA's Mandatory Reporting of Greenhouse Gases Rule distinguishes biogenic CO₂ from other emissions, and actually exempts reporting of process emissions from the food processing industry.²² Likewise, in its Renewable Fuel Standard 2 rulemaking, EPA explained that "[f]or renewable fuels, tailpipe emissions only include non-CO₂ gases, because the carbon emitted as a result of fuel combustion is offset by the uptake of biogenic carbon during feedstock production."²³ The Department of Energy and USDA, along with virtually every government agency in the world to take up the issue, similarly have recognized the lack of any adverse effect from biogenic CO₂ emissions.²⁴ It would be remarkable if EPA, alone in the world, regulated biogenic emissions the same as fossil emissions.

B. EPA Did Not Consider Biogenic Emissions in the 2009 Endangerment Finding

In fact, EPA has never actually determined, one way or the other, that biogenic emissions contribute to climate change. EPA has based its regulation of CO₂ emissions from stationary sources, such as power plants, on the predicate of its 2009 Endangerment Finding for "tailpipe" emissions from motor vehicles.²⁵ Whatever the merit of EPA's position with respect to fossil-based emissions, EPA never specifically addressed biogenic emissions in its 2009 Endangerment Finding.

In its 2009 Endangerment Finding addressing fossil fuel combustion in motor vehicles, EPA concluded that elevated concentrations of six well-mixed greenhouse gases (including CO₂) in the atmosphere are harmful to (*i.e.*, endanger) the environment.²⁶ EPA then determined that this harmful greenhouse gas pollution results directly from emissions of those six greenhouse gases

²¹ As has been well documented, net fluxes of biomass CO₂ to the atmosphere from agricultural sources are, at a minimum, "carbon neutral" in that any CO₂ emissions associated with the combustion of biomass are offset completely by the significant role domestic forests and agriculture play in sequestering carbon as the nation's leading carbon sink.

²² See generally Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 56260 (Oct. 30, 2009).

²³ *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule*, 75 Fed. Reg. 14670, 14,787 (Mar. 26, 2010).

²⁴ See 2016 Biomass Board Report at 7 ("Biobased products . . . recycle carbon (CO₂) from the atmosphere, resulting in air quality improvements when compared to fossil fuel-based products").

²⁵ 74 Fed. Reg. 66496, 66540 (Dec. 15, 2009).

²⁶ See, *e.g.*, 74 Fed. Reg. at 66497: 2-3, 66498: 1, 66516: 2-3, 66536: 3.

from stationary sources and motor vehicles.²⁷ But it is evident from a review of the 2009 Endangerment Finding that EPA did not address the science of biogenic emissions.

One can search the 2009 Endangerment Finding in vain for any mention of biogenic emissions. The word “biogenic” appears nowhere in the endangerment finding and the term “biomass” is used twice, but neither in reference to the significance of biogenic emissions. There is no substantive discussion at all in the endangerment finding of biogenic emissions or the life-cycle aspects of biogenic feedstocks within the atmospheric and terrestrial carbon cycle. Nor did the endangerment finding, which EPA has asserted as the basis for regulation of all carbon dioxide emissions at stationary sources (including agricultural processing facilities and bioenergy plants) ever discuss the scientific distinction between biogenic emissions and fossil emissions from the perspective of elevated concentrations of greenhouse gas. Therefore, there is simply no extant endangerment finding applicable to agricultural biogenic CO₂ emissions that would justify regulation of biogenic CO₂ emissions as a harmful pollutant under the PSD or Title V program, or any other aspect of the Clean Air Act.

To the contrary, the 2009 Endangerment Finding was based on the IPCC Fourth Assessment Report of 2007 and EPA’s annual *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, both of which exclude biogenic CO₂ emissions on the basis of their carbon neutrality.²⁸ For example, one of EPA’s principal conclusions in support of the 2009 Endangerment Finding was that fossil-based emissions from combusting petroleum fuel in motor vehicles represented twenty-three percent of total U.S. emissions of greenhouse gases.²⁹ But EPA’s assessment of motor vehicle emissions as a share of United States greenhouse gas emissions specifically excluded biogenic CO₂ emissions because it was based on the United States Greenhouse Gas Inventory for year 2009.³⁰ The 2009 Inventory itself states at page 3-1: “Carbon dioxide emissions from [combustion of biomass and biomass-based fuels] are not included in national emissions totals because biomass fuels are of biogenic origin. It is assumed that the C [carbon] released during consumption of biomass is recycled as U.S. forest and crops regenerate, causing no net addition of CO₂ to the atmosphere.” In the absence of a prerequisite endangerment finding applicable to biogenic CO₂ emissions, biogenic emissions from the processing of agricultural feedstocks or use as bioenergy cannot be considered a pollutant under the Clean Air Act or regulated as dangerous industrial pollutants.

A closer review of the history of EPA’s positions with respect to biogenic emissions leading up to the 2009 endangerment finding confirms the interpretation that “harmful” greenhouse gas pollution does not include biogenic emissions. As noted, EPA’s 2009 Endangerment Finding quantifies greenhouse gas emissions by reference to its 2009 Emissions

²⁷ See 74 Fed. Reg. at 66497-99.

²⁸ See, e.g., 74 Fed. Reg. at 66510; 66537.

²⁹ 74 Fed. Reg. at 66540.

³⁰ See 74 Fed. Reg. at 66539 n.41 and 66540; *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (April 2009) p. 2-5 Table 2-1 n. b and p. 3-1 (excluding biogenic CO₂ emissions based on principles of carbon neutrality) (“2009 Emissions Inventory”).

Inventory.³¹ This is also reflected in the technical support documents accompanying the 2009 Endangerment Finding.³² EPA has acknowledged that its 2009 Emissions Inventory conforms to the system of emissions accounting established by the Intergovernmental Panel on Climate Change (IPCC) and articulated in the 2006 IPCC Guidelines.³³ Consistent with the 2006 IPCC Guidelines recommendation that each inventory place emissions of CO₂ from combustion of biomass in the section devoted to forestry and land-use changes, as opposed to the section devoted to energy production, EPA's emissions inventories report emissions from combustion of biogenic feedstocks separately as a "Memo item" in the U.S. GHG Inventory and do not include biogenic emissions in the energy sector calculations.³⁴ Similarly, consistent with the IPCC guidance, any carbon stock changes related to the use of biogenic feedstocks in the energy sector, and the CO₂ emissions associated with those carbon stock changes, are accounted for under the forestry and/or agricultural sectors of the U.S. GHG Inventory.³⁵

The 2006 IPCC Guidelines as they apply to the land-use/forestry sector characterize biogenic emissions as carbon neutral because: "Biomass associated with annual and perennial herbaceous (*i.e.*, non-woody) plants is relatively *ephemeral*, *i.e.*, it decays and regenerates annually or every few years. So emissions from decay are balanced by removals due to re-growth making overall net C [carbon] stocks in biomass rather stable in the long term."³⁶ Consequently, the 2006 IPCC Guidelines recommend that: "The change in biomass is only estimated for perennial woody crops. For annual crops, increase in biomass stocks in a single year is assumed equal to biomass losses from harvest and mortality in that same year - thus there is no net accumulation of biomass stocks."³⁷ As further support for the notion that biomass emissions are carbon neutral, a "Frequently Asked Questions" (FAQ) document on the same IPCC website as the 2006 IPCC Guidelines addresses the question "Do the IPCC Guidelines consider biomass used for energy to

³¹ See, *e.g.*, 74 Fed. Reg. at 66510:2-3; 66537:1 ("To date, the focus of UNFCCC actions and discussions has been on the six greenhouse gases that are the same focus of these [endangerment] findings. As a party to the UNFCCC, EPA annually submits the *Inventory of US. Greenhouse Gas Emissions and Sinks to the Convention*, which reports on national emissions of anthropogenic emissions of the well-mixed greenhouse gases."); 66539-40.

³² EPA, *Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*; Vol. 4 (Dec. 7, 2009) (EPA-HQ-OAR-2009-0171-11645) ("TSD4") at 2-3 ("Primary GHGs that are directly emitted by human activities in general are reported in EPA's annual *Inventory of US. Greenhouse Gas Emissions and Sinks* and include carbon dioxide . . . The primary effect of these gases is their influence on the climate system by trapping heat in the atmosphere that would otherwise escape to space."); TSD4 at 6 (Table 1.1); TSD4 at 11-12.

³³ 5 IPCC, 2006 IPCC Guidelines for National Greenhouse Gas Inventories (<http://www.ipccnggip.iges.or.jp/public/2006gl/index.html>); 2009 Emissions Inventory, at 1-2:1, 7-1.

³⁴ See 2006 IPCC Guidelines Vol. 1, at 1.5-1.6.

³⁵ See 79 Fed. Reg. at 1441 n.46.

³⁶ 2006 IPCC Guidelines Vol. 4, at 2.11 (emphasis added).

³⁷ *Id.* at 5.7 (§ 5.2.1.1) (emphasis added); see also *id.* at 5.26 ("In subsequent years, change in biomass of annual crops is considered zero because carbon gains in biomass from annual growth are offset by losses from harvesting.").

be carbon neutral?”³⁸ The answer given by the FAQ with respect to annual herbaceous crop-derived biomass is: “For annual crops, the IPCC Guidelines assume that biomass carbon stock lost through harvest and mortality equal biomass carbon stock gained through regrowth in that same year and so there are no net CO₂ emissions or removals from biomass carbon stock changes.”³⁹

The IPCC indisputably views biogenic CO₂ emissions from annual crops as carbon neutral because biogenic emissions are inconsequential to the global warming process on a life-cycle basis. Consistent with the *2006 IPCC Guidelines*, EPA’s *2009 Emissions Inventory*, which as noted is the foundation of its 2009 Endangerment Findings, accounts for emissions from agricultural lands only to the extent of “changes in organic C stocks in mineral and organic soils due to land use and management, and emissions of CO₂ due to the application of crushed limestone and dolomite to managed land (*i.e.*, soil liming and urea fertilization).”⁴⁰ EPA’s approach to emissions accounting expressly excludes any quantification of the carbon flux attributable to growth, harvest, and fate of agricultural crop material, because that flux is “relatively small and ephemeral.”⁴¹ EPA’s use of the term “ephemeral” is a clear reference to the *2006 IPCC Guidelines* and the IPCC’s recognition that biogenic emissions are insignificant from the standpoint of increases in atmospheric greenhouse gas concentrations that cause global warming.

The U.S. Department of Agriculture has similarly concluded that biogenic CO₂ emissions are insignificant on a life-cycle basis as their effect is ephemeral. In July 2014, USDA, through its Office of Chief Economist, issued Technical Bulletin 1939,⁴² which stated at page 3.43 of that bulletin that: “Both IPCC (2006) and U.S. Environmental Protection Agency (2011) consider herbaceous biomass carbon stocks to be ephemeral, and recognize that there are no net emissions to the atmosphere following crop growth and senescence during one annual crop cycle (West et al., 2011).” Similarly, in May 2014, the World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD), which are recognized private-sector leaders in formulating greenhouse gas emissions inventory guidance, issued guidance⁴³ which at page 62 states: “The biomass associated with annual and perennial herbaceous vegetation is relatively ephemeral – reductions in these biomass stocks from harvesting, the burning of crop residues, or the integration of crop residues into soils, are balanced by stock increases from plant re-growth over a period of only one to a few years. Consequently, companies should also not report any sequestration in herbaceous biomass stocks.” The use of the term “ephemeral” in both of the above-quoted passages is no accident. The term was originally used by the IPCC in its 2006 emissions inventory guidance to characterize CO₂ emissions from combustion or microbial treatment of herbaceous crop-derived material and was later repeated in the IPCC’s FAQ

³⁸ See Q2-10, at 9 (<http://www.ipcc-nggip.iges.or.jp/faq/FAQ.pdf>).

³⁹ *Id.*

⁴⁰ *2009 Emissions Inventory* at 7-1.

⁴¹ *2009 Emissions Inventory* at 7-27:2, 7-39:1, 7-43:1, 7-47:2.

⁴² USDA, *Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory* (http://www.usda.gov/oce/climate_change/estimation.htm).

⁴³ WRI/WBCSD, *GHG Protocol Agricultural Guidance* (<http://www.ghgprotocol.org/standards/agriculture-guidance>).

document, which equated “ephemeral” in this context with carbon neutral – a scientific view being echoed now by USDA and WRI/WBCSD.

In sum, because EPA excluded biogenic emissions from its *2009 Emissions Inventory*, and because EPA’s 2009 Endangerment Finding defined “harmful” pollution by reference to those greenhouse gases in the 2009 Emissions Inventory (*i.e.*, those emissions that the global scientific community had identified as elevated concentrations of greenhouse gas), biogenic emissions were never part of EPA’s 2009 Endangerment Finding and there is no predicate for regulation of biogenic emissions as harmful pollution under the Clean Air Act. This conclusion is consistent with the scientific consensus that emissions of crop-based biogenic CO₂ are inconsequential to the global warming process – they effect no change in carbon stocks and, therefore, cause no harm.

The position that biogenic CO₂ emissions are insignificant and do not warrant an endangerment finding comports with numerous other EPA pronouncements regarding the carbon-neutral or *de minimis* nature of agricultural feedstock emissions. For example, the final rule for EPA’s 2007 Renewable Fuel Standard Program (RFS1) required the exclusion of CO₂ from the combustion by motor vehicles of corn ethanol in comparisons of the lifecycle greenhouse gas emissions of such fuel against the lifecycle emissions of gasoline.⁴⁴ As EPA explained in that rule: “[I]n the long run the CO₂ emitted from biomass-based fuels combustion does not increase atmospheric CO₂ concentrations, assuming the biogenic carbon emitted is offset by the uptake of CO₂ resulting from the growth of new biomass. *Thus ethanol’s carbon can be thought of as cycling from the environment into the plant material used to make ethanol and, upon combustion of the ethanol, back into the environment from which it came.* As a result, CO₂ emissions from biomass-based fuels combustion are not included in their lifecycle emission results and are not used in the CO₂ displacement index calculations shown above.”⁴⁵ Similarly, EPA’s proposal in May 2009 of the current Renewable Fuel Standard Program (RFS2) took the same position not only with respect to combustion by motor vehicles of corn ethanol, but also with respect to combustion of biomass in boilers to produce the corn ethanol.⁴⁶ EPA explained in that rulemaking, which was contemporaneous with its work on the 2009 endangerment finding, that “the CO₂ emitted from biomass-based fuels combustion does not increase atmospheric CO₂ concentrations, assuming the biogenic carbon emitted is offset by the uptake of CO₂ resulting from the growth of new biomass.”⁴⁷

Three months after promulgation of the 2009 Endangerment Finding, EPA reiterated in the final RFS2 rule its position that biogenic CO₂ emissions are insignificant.⁴⁸ The final RFS2 rule, which EPA was finalizing at the same time that it promulgated the 2009 endangerment finding, relied on emission factors in the Argonne National Laboratory’s spreadsheet analysis tool known

⁴⁴ See 72 Fed. Reg. 23900, 23982-83 (May 1, 2007).

⁴⁵ *Id.* (emphasis added).

⁴⁶ See 74 Fed. Reg. 24904, 25039: 3, 25040:1 (May 26, 2009).

⁴⁷ *Id.* at 25040:1.

⁴⁸ See 75 Fed. Reg. 14670, 14787:2 (Mar. 26, 2010).

as “Greenhouse gases, Regulated Emissions, and Energy use in Transportation” (GREET).⁴⁹ The GREET model assigns a zero value to all CO₂ emissions from (i) combustion of annual herbaceous crop-derived biomass to generate steam at a fuel ethanol plant; (ii) fermentation of biomass to generate fuel ethanol; and (iii) combustion of the fuel ethanol by motor vehicles.⁵⁰ In fact, the EPA study explains (at page 76): “Conversion of corn starch to ethanol produces excess CO₂ emissions. Because the CO₂ generated is from the atmosphere during the photosynthesis process, it should not be classified as CO₂ emissions . . . In this study, we assume that lignin is burned in cellulosic ethanol plants to provide steam needed for ethanol production and electricity. While combustion of lignin undoubtedly produces CO₂ emissions, these emissions come from the atmosphere through the photosynthesis process for biomass growth. Thus, the CO₂ emissions from biomass combustion are treated as zero in the GREET model. For the same reason, the CO₂ emissions from ethanol combustion in ethanol vehicles are treated as zero.” Consistent with the GREET model, EPA’s Regulatory Impact Analysis for the final RFS2 rule echoes conclusions in the final RFS2 rule, noting that: “The emission factors for the different fuel types are from GREET and were based on assumed carbon contents of the different process fuels . . . The emissions from combustion of biomass fuel source are not assumed to increase net atmospheric CO₂ levels. Therefore, CO₂ emissions from biomass combustion as a process fuel source are not included in the lifecycle GHG inventory of the biofuel production plant.”⁵¹ Likewise, in administering the RFS2 program, EPA has continued to exclude biogenic emissions from combustion and fermentation of agricultural feedstocks from its comparisons of the lifecycle emissions of newly-proposed biofuels against the lifecycle emissions of corresponding fossil fuels.⁵²

EPA has continued to maintain the position that biogenic emissions are harmless in other contexts subsequent to the 2009 Endangerment Finding, such as its Climate Leaders voluntary greenhouse gas reduction program⁵³ and its 1605(b) voluntary reporting program which it co-administers with the Department of Energy. The government’s position in these programs has been simply that “carbon dioxide emissions of biogenic fuels do not ‘count’ as anthropogenic emissions.”⁵⁴ Consistent with this position, EPA has continued using the same language regarding

⁴⁹ See 75 Fed. Reg. at 14769:3, 14782:2.

⁵⁰ See M.Q. Wang, *GREET 1.5 - Transportation Fuel-Cycle Model, Vol. 1: Methodology, Development, Use, and Results*, at 76 (ANL/ESD-39, Vol. 1) (Aug. 1999) (<https://www.anl.gov/energy-systems/publication/greet-15-transportation-fuel-cycle-model-volume-1-methodology-development>).

⁵¹ See EPA, *Renewable Fuel Standard Program (RFS2) Regulatory Impact Analysis*, at 424 (Feb. 2010) (EPA-420-R-10-006) (<https://www.epa.gov/sites/production/files/2015-08/documents/420r10006.pdf>) (“RFS2 RIA”).

⁵² See, e.g., Wang *et al.*, *Energy and greenhouse gas emission effects of corn and cellulosic ethanol with technology improvements and land use changes*, *Biomass and Bioenergy*, Vol. 35, at 1885, 1891:2, 1892:2 (2011) (“A positive energy balance by corn ethanol is possible because only fossil energy used to produce ethanol is taken into account in energy balance calculations. The energy for corn plant growth via photosynthesis is solar energy and is not considered.”).

⁵³ EPA, *Climate Leaders, Greenhouse Gas Inventory Protocol Core Module Guidance, Direct Emissions from Stationary Sources*, § 1.2 (May 2008) (EPA-430-K-08-003) (“[I]t is assumed that combustion of biofuels do not contribute to net addition of CO₂ to the atmosphere.”).

⁵⁴ U.S. DOE, *Technical Guidelines, Voluntary Reporting of Greenhouse Gases (1605(b)) Program*, at 51 (“By accounting convention, though, carbon dioxide emissions of biogenic fuels do not ‘count’ as anthropogenic

the harmless nature of biogenic emissions and relying on the same IPCC guidance in its greenhouse gas emission inventories.⁵⁵

EPA's position that biogenic CO₂ emissions are insignificant is securely rooted in fundamental science. As explained by leading experts in life-cycle emissions from Michigan State University, Dr. Seungdo Kim and Bruce E. Dale, in the attached technical report (Attachment A, hereto), each carbon atom released in the form of CO₂ directly from combustion, fermentation or wastewater treatment of agricultural crop-based materials is the same carbon atom that the herbaceous plants incorporated into that matter through photosynthesis. Those processes merely return to the atmosphere carbon atoms that were already there only a short time ago. Thus, biogenic emissions cause no change in carbon stocks, do not contribute to elevated concentrations of greenhouse gases, and cause no harm through the global warming process.⁵⁶

It was in the context of this regulatory history that EPA finalized its 2009 Endangerment Finding, which assumed that biogenic CO₂ emissions were insignificant and not part of the "harmful" greenhouse gas pollution identified as endangering the environment. The context and EPA's contemporaneous positions with regard to biogenic CO₂ also explain the complete lack of any discussion of biogenic emissions in the 2009 Endangerment Finding. In other words, EPA felt no need to discuss biogenic emissions since it was not making an endangerment finding that implicated emissions from agricultural feedstocks. Any other interpretation of the 2009 Endangerment Finding ignores the history of EPA's rulemaking and program administration and the contextual setting in which biogenic emissions have been considered carbon neutral by global consensus.

The only indication that EPA ever considered biogenic emissions in its 2009 Endangerment Finding comes from EPA's response-to-comments document ("2009 RTC"), which was issued by EPA in conjunction with the 2009 endangerment finding. In the 2009 RTC, a stakeholder asked EPA to exclude biogenic CO₂ emissions from the endangerment finding on the grounds that biogenic emissions do not contribute to endangerment of health and welfare. In its response, EPA rejected that request, stating that "all CO₂ emissions, regardless of source, influence radiative forcing equally once it reaches the atmosphere and therefore there is no distinction between biogenic and non-biogenic CO₂ regarding the CO₂ and other well-mixed GHGs within the

emissions under the Framework Convention on Climate Change because the carbon embedded in biogenic fuels is presumed to form part of the natural carbon cycle."); 77 ("Reporters that operate vehicles using pure biofuels within their entity should not add the carbon dioxide emissions from those fuels to their inventory of mobile source emissions because such emissions are considered biogenic and the recycling of the carbon is not credited elsewhere.") (Jan. 2007) (<http://www.eia.gov/oiaf/1605/January2007/1605bTechnicalGuidelines.pdf>).

⁵⁵ See, e.g., *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011*, at 7-1, 7-31, 7-44, 7-49, 7-54 (Apr. 12, 2013) (EPA-430-R-13-001), available at (<https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2013-Main-Text.pdf>); *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012*, at 7-1, 7-35, 7-49, 7-54, 7-60 (Feb. 21, 2014), available at (<https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2014-Main-Text.pdf>).

⁵⁶ See S. Kim, PhD and B. Dale, PhD, *The Biogenic Carbon Cycle in Annual Crop-Based Products* (Nov. 20, 2013) (Attachment A, hereto).

definition of air pollution that is reasonably anticipated to endanger public health and welfare.”⁵⁷ However, in light of the absence of any such discussion of biogenic emissions in the proposed endangerment finding or the final 2009 Endangerment Finding itself, it is apparent that the EPA staff member who prepared that response was mistaken as to the definitional foundation of the 2009 Endangerment Finding. Moreover, as discussed at length above, EPA had based the endangerment finding on the IPCC and emissions inventory approaches, which acknowledged the scientific principle that biogenic emissions are carbon neutral on a life-cycle basis and are not counted as part of the “elevated” concentration of greenhouse gases which results from society’s burning of fossil fuels. Accordingly, EPA’s response that molecules of CO₂ are identical was non-responsive to the core question of whether biogenic CO₂ contributes to “elevated” levels of atmospheric CO₂ compared to pre-industrial concentrations. As noted, it is only the elevated concentration that EPA has determined endangers the environment, which is understandable as the non-elevated concentration of CO₂ in the atmosphere keeps the earth at habitable temperatures. In short, a single response to a stakeholder comment, which is inconsistent with and divorced from the record basis for the agency action, cannot form a rational basis to interpret the 2009 Endangerment Finding as concluding that biogenic emissions are harmful and cause global warming. To the contrary, the 2009 Endangerment Finding supports the conclusion that biogenic emissions are harmless.

Despite EPA’s recent assertions in the McCabe memo, Clean Power Plan and elsewhere that there is no distinction between biogenic CO₂ and fossil CO₂, EPA has nonetheless recognized in other contexts that there is indeed a scientific distinction. As a striking example, EPA’s ill-fated “Deferral Rule” itself evidences that EPA never actually determined in the 2009 Endangerment Finding whether biogenic CO₂ emissions are “dangerous” pollutants, such that the agency is free to decide whether and how biogenic CO₂ emissions should be regulated going forward. Two years following its 2009 Endangerment Finding for fossil fuel emissions from motor vehicles, and in response to a stakeholders petition for administrative reconsideration, EPA attempted to defer application of its greenhouse gas regulations to biogenic CO₂ emissions from stationary sources under the PSD and Title V rules until it could complete a scientific review of the climate effects of biogenic emissions.⁵⁸ At the same time, EPA began developing an accounting process for evaluating the life-cycle of biogenic feedstocks known as the Biogenic Accounting Factor framework, and charged its Science Advisory Board with supporting its study of biogenic emissions.⁵⁹ That review process has now taken more than six years and appears nowhere close to completion. But the fact that EPA constituted the scientific review process in the first place

⁵⁷ See EPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act: EPA’s Response to Public Comments*, Vol. 9: *The Endangerment Finding*, at 5 (2009) (EPA-HQ-AR-2009-0171-11676) (“2009 RTC Vol. 9”).

⁵⁸ *Deferral for CO₂ Emissions From Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs*, 76 Fed. Reg. 43490 (July 20, 2011).

⁵⁹ EPA Office of Air and Radiation, Office of Atmospheric Programs, Climate Change Division, *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources* (2d Draft) (Nov. 2014) (“BAF Framework”); see also Office of Atmospheric Programs, *Accounting Framework for Biogenic CO₂ Emissions from Stationary Sources* (Sept. 2011) ([https://www3.epa.gov/climatechange/Downloads/ghgemissions/Biogenic-CO₂-Accounting-Framework-Report-Sept-2011.pdf](https://www3.epa.gov/climatechange/Downloads/ghgemissions/Biogenic-CO2-Accounting-Framework-Report-Sept-2011.pdf)) (“Biogenic Accounting Framework”).

illustrates that EPA never reached a definitive conclusion in the 2009 Endangerment Finding as to the nature of biogenic CO₂ as a harmful pollutant.

The Deferral Rule was originally intended for a period of three years; however, at about the time the rule expired of its own terms, the D.C. Circuit vacated the rule by rejecting the administrative law doctrines that EPA had invoked to defend the rule.⁶⁰ Importantly, however, EPA had (somewhat mystifyingly) expressly declined to rely on any scientific basis for its authority to exempt insignificant or *de minimis* emissions from regulation in defending the Deferral Rule.⁶¹ In light of this procedural history, the D.C. Circuit's invalidation of the Deferral Rule presents no precedential impediment for EPA either to properly interpret the 2009 Endangerment Finding as having not addressed biogenic emissions or to exempt biogenic emissions under its general authority to exempt insignificant emissions on the basis of sound science.⁶² Put simply, it seems obvious that EPA would not have needed a deferral rule, nor embarked on a multi-year scientific study of biogenic emissions, if it had already studied the issue sufficiently in its 2009 Endangerment Finding.

In short, EPA's 2009 Endangerment Finding did not actually address the science of biogenic CO₂ in determining whether biogenic CO₂ from agricultural sources was "harmful" such that it should be regulated as a "pollutant." Accordingly, under the Supreme Court's precedent, any regulation of biogenic CO₂ under the Clean Air Act would be *ultra vires*, arbitrary, and capricious until EPA completes a thorough, meaningful and scientifically informed endangerment finding specific to biogenic CO₂ sources, considering the context of Congress's use of the term "pollutant" in the Clean Air Act. EPA should acknowledge this fact in the Significance Rule rulemaking and either determine that biogenic CO₂ emissions are not currently subject to a predicate endangerment finding or include an exemption for biogenic CO₂ emissions from short-cycle agricultural biomass feedstocks.

IV. EPA MUST DEFINE KEY TERMS TO CLARIFY THE EXCLUSION OF BIOGENIC EMISSIONS

In order to fully implement the Supreme Court's mandate, EPA must define key regulatory terms such as "any pollutant", "greenhouse gases", and "subject to regulation" in the proper context, considering the scientific nature of biogenic emissions. This context necessarily includes

⁶⁰ *Ctr. for Biological Diversity v. EPA*, 722 F.3d 401 (D.C. Cir. 2013).

⁶¹ 722 F.3d at 409.

⁶² Indeed each of the panel judges in the Deferral Rule litigation suggested that EPA retained the broad authority described above to permanently exclude biogenic CO₂ emissions, provided the Agency justified its decision in the rulemaking record. 722 F.3d at 412 ("leav[ing] for another day the question whether the agency has authority under the Clean Air Act to permanently exempt biogenic carbon dioxide sources from the PSD permitting program"); 722 F.3d at 420 (Henderson, J. dissenting) (recognizing the "availability of a *de minimis* exception" to permanently exclude biogenic CO₂ emissions). Even Judge Kavanaugh's concurring opinion, which asserted that EPA's regulatory discretion was limited by the agency's prior interpretation of its Clean Air Act authority suggested that EPA retained at some limited options to permanently exclude biogenic CO₂ emissions. 722 F.3d at 413 n.1 (Kavanaugh, J. dissenting) (suggesting that EPA could exempt biogenic CO₂ emissions by amending or reinterpreting its Endangerment Finding).

acknowledgement that EPA has not thoroughly considered the *de minimis* nature of biogenic emissions and has not made an endangerment finding specific to biogenic emissions, which is a predicate to regulation under the Clean Air Act. Accordingly, EPA must revisit the definitions in its PSD program (and elsewhere in the Clean Air Act) with these limitations in mind, and must craft regulatory definitions in a manner so as to effectively exclude biogenic emissions from regulation under all portions of the Clean Air Act.

A. Definition of “Any Pollutant”

First, EPA must interpret the phrase “any air pollutant” as it appears in the Clean Air Act to exclude biogenic emissions, in light of the fact that EPA has not made an endangerment finding specific to biogenic emissions. There is no indication in the Clean Air Act that Congress would have intended that phrase to encompass emissions that are not actually harmful on a life-cycle basis. Nor would Congress have allowed EPA to simply ignore life-cycle science. As EPA acknowledges in the proposal, greenhouse gases are “unique.”⁶³ Accordingly, any attempt to regulate these unique emissions should be based on careful consideration by the agency of the biological carbon cycle of CO₂ emissions and the necessity to human life and welfare of a baseline concentration of CO₂ in the atmosphere, both of which are core aspects of the unique nature of greenhouse gases.

B. Definition of “Greenhouse Gases”

Similarly, the definition of “greenhouse gases” or “GHGs” should be phrased in EPA’s regulations in each instance of use to exclude biogenic CO₂. For example, the proposed definition under 40 C.F.R. § 51.166(b)(31) in the Significance Rule should read as follows, with the addition of the italicized phrasing: “Greenhouse gases (GHGs) means the air pollutant defined in § 86.1818-12(a) of this chapter as the aggregate group of six greenhouse gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, *excluding biogenic emissions from agricultural feedstocks.*” 81 Fed. Reg. at 68142:2.

C. Definition of “Subject to regulation”

The definition of “subject to regulation” should also be phrased in EPA’s regulations in each instance of use to exclude biogenic CO₂. For example, the proposed definition under 40 C.F.R. § 51.166(b)(48) should read as follows with the addition of the italicized phrasing: “Subject to regulation means, for any air pollutant, that the pollutant is subject to either a provision in the Clean Air Act, or a nationally-applicable regulation codified by the Administrator in subchapter C of this chapter, that requires actual control of the quantity of emissions of that pollutant, and that such a control requirement has taken effect and is operative to control, limit or restrict the quantity of emissions of that pollutant released from the regulated activity. Pollutants subject to regulation include, but are not limited to, greenhouse gases as defined in paragraph (b)(31) of this section, *but excluding biogenic emissions from agricultural feedstocks.*” 81 Fed. Reg. at 68142:3.

⁶³ 81 Fed. Reg. at 68122:2 (“The EPA’s judgment at this time is that the approaches we have previously used to establish SERs are not workable for the establishment of a GHG SER due the unique nature of GHG emissions”).

V. IF BIOGENIC EMISSIONS ARE CURRENTLY SUBJECT TO REGULATION, EPA SHOULD DETERMINE THAT CROP-BASED BIOGENIC EMISSIONS ARE INSIGNIFICANT

A. EPA Has Authority to Exempt Crop-Based Biogenic Emissions as Insignificant

As EPA recognizes in its proposed Significance Rule, it has discretion to determine that certain emissions are *de minimis* and to exempt such emissions from Clean Air Act regulatory programs.⁶⁴ In its landmark decision addressing greenhouse gases in *Massachusetts v. EPA*, the Supreme Court, although holding that EPA has the authority to regulate greenhouse gas emissions as “air pollution” generally, also recognized that “an agency has broad discretion to choose how best to marshal its limited resources and personnel to carry out its delegated responsibilities.”⁶⁵ Similarly, in *Alabama Power Co. v. Costle*, 636 F.2d 323, 360-61, 400 (D.C. Cir. 1979), the D.C. Circuit recognized EPA’s discretion “to exempt from PSD review some emission increases on grounds of *de minimis* or administrative necessity” where regulation would “yield a gain of trivial or no value.” The Supreme Court’s flagship *Chevron* decision also addressed EPA’s discretion to define the scope of Clean Air Act permitting programs, overturning a D.C. Circuit decision that failed to defer to EPA’s interpretation of what constitutes a “stationary source” subject to special permitting conditions in nonattainment areas.⁶⁶ And as discussed above, the Supreme Court has reminded EPA more recently in *UARG* that the agency must interpret statutory provisions in practical context.

In reliance on this broad discretion, EPA has previously interpreted the Clean Air Act with a contextual lens in analogous situations. Notably, EPA has limited PSD permitting to those pollutants that are “subject to regulation” under the Clean Air Act, notwithstanding that the statute itself refers to “any pollutant.”⁶⁷ Likewise, even though the Clean Air Act may be read to require

⁶⁴ 81 Fed. Reg. at 68120.

⁶⁵ *Massachusetts v. EPA*, 549 U.S. 497, 527-29, 533 (2007) (citing *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-845 (1984)); see also *Am. Coke & Coal Chems. Inst. v. EPA*, 452 F.3d 930, 941-42 (D.C. Cir. 2006) (“The court owes particular deference to EPA when its rulemakings rest upon matters of scientific and statistical judgment within the agency’s sphere of special competence and statutory jurisdiction.”). Courts have noted EPA’s discretion regarding the timing and approach to the regulation of pollutants following the Court’s decision in *Massachusetts v. EPA*. For example, in the remand from the Supreme Court’s decision, Judge Tatel observed that “nothing in section 202, the Supreme Court’s decision in *Massachusetts v. EPA*, or our remand order imposes a specific deadline by which EPA must determine whether a particular air pollutant poses a threat to public health or welfare.” *Massachusetts v. EPA*, No. 03-1361, separate statement of Tatel, J. concurring in part and dissenting in part from denial of petition, June 26, 2008, at 1. Similarly, the Northern District of California also rejected an argument that EPA is compelled to regulate all forms of greenhouse gases following *Massachusetts*. See *S.F. Chapter of A. Philip Randolph Inst. v. EPA*, 2008 U.S. Dist. LEXIS 27794 at 10-11 (N.D. Cal. Mar. 28, 2008). Consistent with the D.C. Circuit’s conclusion, the California district court recognized that “[t]he Supreme Court was careful not to place a time limit on the EPA, and indeed did not even reach the question whether an endangerment finding had to be made at all.”

⁶⁶ *Chevron, U.S.A., Inc. v. NRDC*, 467 U.S. 837, 841-42 (1984).

⁶⁷ See *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 134-35 (D.C. Cir. 2012) (*per curiam*) (finding that the Clean Air Act does not require EPA to regulate “a ‘physical, chemical, [or] biological’ substance

PSD permitting for any change to a major source that increases emissions of any air pollutant by any amount, *see* Clean Air Act §§ 111(a)(4), 169(2)(C), EPA has limited the permitting requirements to modifications that result in a “significant” net increase in actual emissions.⁶⁸ For example, carbon monoxide emissions increases of up to 99 tons per year are considered insignificant (*de minimis*) under EPA’s implementing regulations.⁶⁹ Thus, EPA has a long-standing policy of applying the *de minimis* doctrine to exclude from regulation under the PSD and Title V permitting programs those sources whose emissions increases are deemed insignificant from an air quality perspective, despite the fact that the literal language of the Clean Air Act requires permits for *any* emissions increase.⁷⁰

EPA has also exercised its discretion to distinguish among various families of chemical compounds to exclude regulation of those emissions that have negligible environmental impacts. For example, EPA excludes emissions of certain volatile organic compounds (VOCs) as smog precursors because they don’t react in the atmosphere like other compounds and do not cause environmental impacts regardless of the fact that these compounds are both “volatile” and “organic” and therefore meet EPA’s definition of VOCs.⁷¹ Likewise, EPA has distinguished among different categories of particulate matter (PM) based on differences in environmental and public health impacts.⁷² Thus, EPA has distinguished between fine and coarse PM and established distinct significance levels for particulate matter smaller than 10 microns in diameter and smaller than 2.5 microns in diameter based on the particle size’s impact on public health.

In the greenhouse gas context, EPA exercised its discretion to limit the scope and reach of its greenhouse gas regulations by choosing to limit the pollutants that qualify as “greenhouse gases” to “the aggregate group of six” specified chemicals and excluded other chemicals that also have climate impacts.⁷³ In fact, EPA limited the “pollutant” greenhouse gas to these six

EPA had determined was harmless”), *reversed in part by UARG v. EPA*; *see also Alabama Power*, 636 F.2d at 352 n.57.

⁶⁸ *See* 40 C.F.R. §§ 52.21(b)(2)(i), 52.21(i); *see also United States v. DTE Energy Co.*, 711 F.3d 643, 645 (6th Cir. 2013).

⁶⁹ 40 C.F.R. § 52.21(b)(23)(i); *see also* 45 Fed. Reg. 52676, 52705-09 (Aug. 7, 1980) (setting significance levels for PSD permitting programs based on *de minimis* exception).

⁷⁰ *See* 40 C.F.R. § 52.21(b)(23)(i) and (j)(2); 45 Fed. Reg. at 52722; *Alabama Power*, 636 F.2d at 405.

⁷¹ *See* 40 C.F.R. § 51.100(s); 40 C.F.R. §§ 52.21(b)(2)(ii) and 52.21(b)(30); 40 C.F.R. § 51.100(d); 57 Fed. Reg. 3941, 3943-44 (Feb. 3, 1992) (disagreeing with comment that definition exceeded EPA’s statutory authority, asserting that “it is an administrative necessity and reasonable to define VOC to include all organic compounds except those EPA has determined to be negligibly reactive.”).

⁷² 40 C.F.R. § 52.21(b)(23)(i); *Alabama Power*, 636 F.2d at 369 n.134 (“EPA has discretion to define the pollutant termed “particulate matter” to exclude particulates of a size or composition determined not to present substantial public health or welfare concerns.”).

⁷³ *See* 75 Fed. Reg. 25324, 25397 (May 7, 2010) (identifying the six compounds as “[t]he primary greenhouse gases of concern”); *id.* at 25398-99 (describing light-duty vehicle emissions standards as regulating “the single air pollutant” constituting the aggregate of the six identified gases).

compounds despite its findings that they only account for 75% of total anthropogenic heating.⁷⁴ Similarly, in its rulemaking restricting emissions of carbon dioxide from new electric power plants, EPA acknowledged that it has broad discretion to exclude from regulation not only subcategories of a particular source categories, but also particular emissions. Thus, EPA excluded from that rule all emissions of non-CO₂ greenhouse gases, including methane and other powerful greenhouse gases, and to justify its position, EPA explained that such emissions “represent less than 1 percent of total estimated GHG emissions” from electric power plants.⁷⁵

In its proposed Significance Rule, EPA identifies various factors that would support a *de minimis* finding for greenhouse gases: (1) the regulatory context, including the nature of the pollutant and the dangers caused by increases in that pollutant; (2) the nature and purposes of the regulatory program; and (3) the administrative and implementation burdens of, and the gain achieved from, regulating the activities at or below a certain level. 81 Fed. Reg. at 68121:1. Because the science dictates that biogenic CO₂ emissions are part of the natural annual carbon cycle and do not increase atmospheric CO₂ concentrations, each of these factors commands that EPA exclude biogenic emissions as *de minimis* for all Clean Air Act purposes.

B. Science Supports a De Minimis Determination Because Biogenic Emissions Are Not Harmful

As discussed above, biogenic emissions from agricultural feedstocks are not harmful to the environment because they do not contribute to elevated levels of greenhouse gas concentrations. For the same scientific reasons, biogenic CO₂ emissions are clearly insignificant, whether from the perspective of net life-cycle effect on atmospheric greenhouse gas concentrations or as a fraction of nationwide greenhouse gas emissions, which are dominated by fossil fuel combustion. For illustration, looking only at the electricity sector, direct stack emissions of CO₂ from bioenergy sources are at most 0.04 percent of the direct emissions of CO₂ from combustion of fossil fuels, based on conservative calculations using statistics published by the U.S. Energy Information Administration.⁷⁶ Specifically, the amount of CO₂ emitted in 2012 by the electric power sector through combustion of coal, natural gas, petroleum liquids and petroleum coke was nearly 1,982,000 million kilograms, whereas the amount of CO₂ emitted in that year by that sector through combustion of “other waste biomass” (*i.e.*, agricultural crop byproducts, straw, sludge waste and other biomass, excluding wood and wood-derived fuels) was 817 million kilograms, or approximately 0.04 percent of the fossil CO₂ emissions. There are no comprehensive statistics on biogenic emissions from all sources, but the volume of emissions from bioenergy is vastly smaller in volume than the 1 percent threshold that EPA used to justify the exclusion of five greenhouse

⁷⁴ 74 Fed. Reg. at 66517, 66520 (excluding other gases because they are not thought to be a primary driver of radiative heating, or because their climate impact is unknown).

⁷⁵ 79 Fed. Reg. 1430 at 1446:1-2 (Jan. 8, 2014).

⁷⁶ Calculations based on EIA, *Electric Power Annual 2012*, tables 5.1.D, 5.2.D, 5.3.D, 5.4.D, 5.8.E (Dec. 2013) (<http://www.eia.gov/electricity/annual/epa.pdf>) (statistics on fuel consumption by btu) and EPA’s Climate Leaders Program, *Emission Factors for Greenhouse Gas Inventories*, at 1 (Nov. 7, 2011) (https://www.epa.gov/sites/production/files/2015-11/documents/emission-factors_2011.pdf) (emission factor for GHG emissions per btu).

gases, other than carbon dioxide, from the reach of its new source performance standards (NSPS) rulemaking for new or modified electric power plants.⁷⁷

EPA's own Biogenic Accounting Framework, which the agency issued in revised form on November 19, 2014, strongly corroborates the Coalition's position as it relates to CO₂ emissions.⁷⁸ The 2014 BAF repeatedly treats as a scientifically sound working assumption the proposition that the CO₂ emissions resulting *directly* from the combustion of such biomass are carbon neutral.⁷⁹ In fact, in the 2014 BAF, EPA provided hypothetical examples to illustrate how the BAF would operate in the case of corn stover combustion, concluding that any factor combustion of corn stover would be zero or tiny.⁸⁰ Similarly, emissions of biogenic CO₂ associated with processing agricultural crops, assuming they should legally be considered (which is not the case), are also harmless from a global warming standpoint.

Although EPA has identified some questions regarding life cycle analysis of long-rotation biomass from forest products, EPA does not need to study emissions from the agricultural sector further. In fact, the Biogenic CO₂ Coalition has on numerous occasions inquired of EPA whether it needs additional information regarding the life-cycle emissions profile of short-rotation agricultural biomass, and the agency has not indicated that more data is needed. Indeed, as reviewed in the report by Professors Kim and Dale, which has been presented to EPA in comments submitted by the Biogenic CO₂ Coalition in various rulemakings,⁸¹ the data currently before the agency is more than adequate to support a finding that biogenic CO₂ emissions from agricultural crops are insignificant on a life-cycle basis. The Kim-Dale Report examined the biogenic carbon cycle for combustion of crop residues using corn stover as an example of agricultural feedstocks under three different scientifically accepted methodologies: (i) life cycle biogenic carbon balance; (ii) mass balance; and (iii) EPA's proposed *Biogenic Accounting Framework*. See Kim-Dale Report pp. 30-35). The report studied the release and sequestration of biogenic carbon during agricultural production of corn and corn stover, the transportation and storage of corn and corn stover, and the ultimate combustion of the corn stover for bioenergy. The report found under all

⁷⁷ See 79 Fed. Reg. at 1446:1-2 (excluding all emissions of non-CO₂ greenhouse gases on the basis that such emissions "represent less than 1 percent of total estimated GHG emissions" from EGUs).

⁷⁸ See EPA Office of Atmospheric Programs, *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources*, (Nov. 2014) ("2014 BAF")(<http://www.epa.gov/climatechange/ghgemissions/biogenicemissions.html>).

⁷⁹ See, e.g., 2014 BAF, *Appendix D: Feedstock Categorization and Definitions*, at D-10 ("[T]he net atmospheric biogenic contribution from the growth and harvest of the feedstock itself [*i.e.*, "conventional crops"] is in balance"); *Appendix 1: Illustrative Forestry and Agriculture Case Studies Using a Retrospective Reference Point Baseline*, at 1-14 ("GROW is set to 0 because the ratio of net growth to removals is 0."); *Appendix L: Illustrative Forestry and Agriculture Case Studies Using a Future Anticipated Baseline*, at L-17 ("The GROW term defaults to 0 for agricultural biomass sources in this methodology. The assumption is that, with annual crops, biogenic CO₂ 'growth' in this context equals what is harvested (removed) from the system for energy generation."); 2014 BAF, at 6 n.18, 16 (§2.4.1.), 43 (§4.4).

⁸⁰ See 2014 BAF *Appx I*, at 1-14 to 1-15; *Appx M*, at M-10 (Table M-5 and §6.1); *Appx M*, at M-11 (Table M-6, last row).

⁸¹ See, e.g., Seungdo Kim, Ph.D and Bruce E. Dale, Ph.D, *The Biogenic Carbon Cycle in Annual Crop-Based Products*, Michigan State University (Nov. 22, 2013) (available at www.biogenicCO2.com).

three methods that the indirect biogenic carbon emissions were net negative – *i.e.*, that the biogenic carbon cycle yields a net sequestration of carbon (and a net benefit to the environment). As discussed above, both IPCC and EPA, as well as private sector organizations, consider herbaceous biomass carbon stocks to be ephemeral in the inventory context, and recognize that there are no net emissions to the atmosphere during the annual crop cycle.

Interestingly, EPA admits in the Significance Rule that it actually has no way to determine the impact of greenhouse gases on the global environment,⁸² and thus EPA has no way to determine the danger posed by any level of emissions, whether biogenic or fossil. In light of that admission, it is difficult to understand how EPA made the 2009 endangerment finding with respect to fossil fuels, but certainly EPA now concedes that it could not have made any endangerment findings with respect to harm from biogenic emissions. Regardless, for the reasons discussed herein, biogenic emissions can be found to present no danger due to their net carbon-neutral nature. Therefore EPA can properly determine biogenic emissions to be insignificant or de minimis, regardless of the amount of emissions, provided that the biogenic emissions are from short-rotation agricultural feedstocks.

C. The PSD Program Is Not Suited for Regulation of Biogenic Emissions

The PSD program, at its core, was designed by Congress to prevent air quality from eroding in areas that were relatively clean where the more stringent requirements applicable to nonattainment areas were not triggered. Because biogenic emissions are not harmful and do not adversely affect either ambient air or global greenhouse gas concentrations, it serves no regulatory purpose to consider them in the PSD context. As the Supreme Court has chastened EPA, “the Act does not envision an elaborate, burdensome permitting process for . . . harmless airborne substances.” *UARG*, 134 S. Ct. at 2440.

D. Regulation of Biogenic Emissions Is Burdensome With No Gain

Because biogenic emissions are scientifically harmless, there would be no gain achieved by regulating biogenic emissions as greenhouse gas pollution under the Clean Air Act. Any emissions reduction that could be achieved at the end of the day through application of BACT under the PSD program, could not actually be required under the balancing factors in the Clean Air Act, as any cost of control technology would be uneconomic compared to the lack of any benefit from reducing biogenic emissions since biogenic emissions do not cause harm. EPA cannot use the PSD program to force stationary sources to provide environmental benefits, as opposed to reducing environmental harms associated with emissions from that facility.

For the same reasons, any administrative or implementation burden would outweigh the non-existent gain from such regulation. However, it is worth noting that EPA seems to severely underestimate the regulatory burden caused by applying the PSD permitting program and Clean Power Plan rules to biogenic feedstocks. As discussed further in Parts VI and VII, below, the

⁸² 81 Fed. Reg. at 68123:1 (“current climate modeling tools are not capable of isolating the precise correlations between singular, incremental facility-specific GHG emissions changes, ambient CO₂ concentrations, and climate impacts”).

uncertainty associated with permitting fermentation units and other sources of biogenic emissions from feedstock processing has deterred investment in the bioeconomy and thrown up unnecessary barriers to construction or expansion projects. Similarly, the Obama Administration's current approach to biogenic emissions in its Clean Power Plan effectively disqualifies renewable bioenergy as a solution to reducing fossil fuel greenhouse gas emissions. As noted above, EPA has taken the position that other aspects of the PSD program such as ambient impacts analysis would not apply to greenhouse gases, but as noted that conclusion is subject to question following the *UARG* decision and may lead to litigation.

Accordingly, new source review for biogenic CO₂ emissions under the PSD program, and BACT review in particular, would be a pointless exercise since the outcome would be predetermined – there is simply no appropriate BACT for biogenic emissions. Making the PSD applicable to biogenic emissions would simply compound the administrative burden for facilities going through new source review for other emissions and would expose the facility to (unfortunately) real litigation risks such as have been documented in recent years.

VI. EPA HAS NOT SATISFIED THE REGULATORY FLEXIBILITY ACT

EPA's proposed rule includes a certification of no effect on small business. 81 Fed. Reg. at 68140. EPA also concluded that the proposed significant emissions rate of 75,000 tpy would relieve regulatory burdens. However, EPA did not undertake a sufficient analysis of economic impacts in the context of biogenic emissions.

EPA's failure to distinguish between fossil emissions and biogenic emissions effectively disqualifies bioenergy as a low carbon energy source and imposes burdens on all biogenic sources, including small businesses that are engaged in entrepreneurial development of biomass technologies, such as low carbon and renewable fuels. Similarly, if EPA fails to amend its current policies as required by the Supreme Court mandate, its PSD regulations would continue to impose unnecessary permitting burdens on small businesses that may have emissions of biogenic CO₂ in excess of the proposed (or final) significant emissions rate.

It is obvious from the proposed Significance Rule that EPA has not studied the regulatory impact on biogenic source categories at all. The proposed rule summarizes EPA's review of fossil-fuel combustion sources and certain non-combustion facilities such as landfills, cement production and petroleum refineries. However, EPA neglected to assess emissions from fermentation units such as those that process agricultural feedstocks used to produce bioproducts. 81 Fed. Reg. at 68132. EPA did not request information relating to such plants from stakeholders nor apparently did EPA make any effort to characterize this sector. Emissions from large fermentation units, while carbon neutral, can nominally be well in excess of EPA's proposed significant emissions rate of 75,000 tons pr year.

Similarly, in evaluating regulatory burdens, EPA only looked at PSD permits that were applied for and advanced through the regulatory process. 81 Fed. Reg. at 68128. This approach suffers from a critical flaw in overlooking projects that have been deterred by EPA's hostile policies with regard to biogenic emissions, and therefore never entered the PSD system. Accordingly, EPA's conclusion in the Significance Rule proposal that "PSD has not imposed unreasonable administrative and enforcement burdens," 81 Fed. Reg. at 68137:2, is patently

arbitrary and capricious because EPA never examined those still-born projects that never advanced to the permitting stage precisely because of the weight of those anticipated burdens.

EPA also apparently failed to recognize that the national GHG inventory and greenhouse gas reporting rules exempt biogenic emissions or distinguish such emissions from fossil-based greenhouse gases, particularly as applied to the food processing sector. 81 Fed. Reg. at 68132. EPA's assessment of biomass energy focused on forest-derived biomass in the pulp and paper sector and appears to have overlooked biomass opportunities from agricultural biomass and residues. 81 Fed. Reg. at 68129:3.

Finally, EPA oddly acknowledges that it did not actually determine a *de minimis* level for greenhouse gas emissions; rather it has merely proposed a finding that smaller projects (with non-GHG emissions near the lower most applicability thresholds) would have *de minimis* associated greenhouse gas emissions.⁸³ In other words, EPA did not study whether a higher significance level would be appropriate pursuant to the Supreme Court's *UARG* mandate, nor did EPA consider whether a higher significance level should be established for biogenic emissions (the Coalition posits that such a level should, in effect, be set at infinity).

Because EPA has not studied sources of biogenic emissions at all, it cannot determine whether the assumed regulatory costs in the proposed rule would be applicable to such sources. For example, EPA's assertion that the average cost to undergo BACT review for greenhouse gases is only \$24,000 is implausible based on the experience of Coalition members. 81 Fed. Reg. at 68136. This is particularly concerning given the lack of clarity as to how BACT review must be conducted, lack of data on available control technologies or techniques in the context of the carbon neutral life cycle of biogenic emissions, and potential costs of litigation (which unfortunately is quite likely based on past experience).⁸⁴

In sum, unless EPA recognizes the *de minimis* nature of any level of biogenic emissions, it must conduct a more thorough regulatory impacts review under applicable law.

VII. EPA HAS NOT SATISFIED E.O. 13211 ENERGY SUPPLY REVIEW

Because EPA has not considered the effect of its current regulations on bioenergy sources, EPA has not complied with Executive Order 13211 with respect to agency actions affecting energy supply. 81 Fed. Reg. at 68141. EPA's failure to distinguish between fossil emissions and biogenic

⁸³ 81 Fed. Reg. at 68122:2 ("The proposed SER is not a level of GHGs below which the EPA has concluded there is a *de minimis* impact on the global climate. Rather, the *de minimis* level proposed in this rule reflects only a level of GHG emissions from an 'anyway source' below which the EPA is proposing to find that there would be trivial or no value in applying the BACT requirement").

⁸⁴ For example, the Supreme Court's decision in *UARG* strongly suggested that an impacts analysis would be required for all sources triggering PSD review, which EPA incorrectly assumes is not applicable but would add significant additional costs if stationary sources were forced into new source review for biogenic emissions. See *UARG*, 134 S. Ct. at 2457 (Alito, J., concurring in part and dissenting in part) (noting that EPA may not ignore the statutory text of section § 165 of the Clean Air Act requires "an analysis of the ambient air quality . . . at the site of the proposed major emitting facility and in the area potentially affected by the emissions from such facility for each pollutant regulated under [the Clean Air Act]").

emissions effectively disqualifies bioenergy as a low carbon energy source and imposes burdens on bioenergy stationary sources, which in turn significantly limits the quantity and diversity of American energy supply, distribution and use. Unless EPA exempts biogenic emissions, as requested in these comments, EPA must undertake the evaluation required by E.O. 13211.

* * * * *

For the legal and scientific reasons detailed above, the Coalition views any regulation of emissions of crop-derived CO₂ as unlawful and unjustifiably burdensome. Accordingly, the Coalition respectfully requests that EPA: (1) categorically exclude from the Clean Air Act, including the definition of “pollutant” and Clean Air Act regulations generally, those CO₂ emissions resulting from the combustion or processing of agricultural feedstocks derived from short-rotation herbaceous crops; (2) determine that such biogenic CO₂ emissions are insignificant and *de minimis*, regardless of amount, in recognition of the established science on life-cycle carbon flow; and (3) expressly confirm that such exclusion and significance determination excludes biogenic CO₂ from treatment as “a pollutant subject to regulation” for purposes of the PSD and Title V permitting programs under the Clean Air Act.

The undersigned associations appreciate the opportunity to comment on this proposal. If you have any questions, please contact John Bode, Chair of the Biogenic CO₂ Coalition, at (202) 534-3498 or JBode@corn.org.

Respectfully submitted,



John Bode, Chair

Biogenic CO₂ Coalition

American Bakers Association

American Farm Bureau Federation

Corn Refiners Association

Enginuity Worldwide

National Corn Growers Association

National Cotton Council of America

National Cottonseed Products Association

National Oilseed Processors Association

North American Millers' Association

Biogenic CO₂ Coalition Members

American Bakers Association (ABA) is a national association that represents the interests of bakers before the U.S. Congress, federal agencies, and international regulatory authorities. ABA advocates on behalf of more than 700 baking facilities and baking company suppliers.



American Farm Bureau Federation (AFBF) is an independent, non-governmental, voluntary organization governed by and representing farm and ranch families united for the purpose of analyzing their problems and formulating action to achieve educational improvement, economic opportunity and social advancement and, thereby, to promote the national well-being.



Corn Refiners Association (CRA) is the national trade association representing the corn refining (wet milling) industry of the United States. CRA and its predecessors have served this important segment of American agribusiness since 1913. Corn refiners manufacture starches, sweeteners, corn oil, bioproducts (including ethanol), and animal feed ingredients.



Enginuity Worldwide makes an engineered solid biomass fuel, using agricultural residues and woody wastes as the feedstocks, that can be used to co-fire with coal in power plants to produce base load energy. Using carbon neutral farm-based biomass provides an immediate carbon benefit that can help power companies comply with their GHG reduction targets.



National Cotton Council of America (NCC) aims to ensure the ability of all U.S. cotton industry segments to compete effectively and profitably in the raw cotton, oilseed and U.S.- manufactured product markets at home and abroad. NCC serves as the central forum for consensus-building among producers, ginner, warehouse, merchant, cottonseed processors/dealers, cooperatives and textile manufacturers. The organization is the unifying force in working with the government to ensure that cotton's interests are considered.



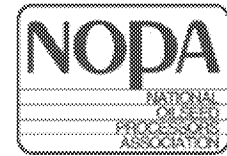
National Corn Growers Association (NCGA) represents more than 40,000 dues-paying corn farmers nationwide and the interests of more than 300,000 growers who contribute through corn checkoff programs in their states. NCGA and its 48 affiliated state organizations work together to create and increase opportunities for corn growers.



National Cottonseed Products Association (NCPA) is an organization of firms and individuals engaged in the processing of cottonseed and the marketing of cottonseed products, as well as cottonseed. These include oil mills, refiners, product dealers and product brokers.



National Oilseed Processors Association (NOPA) is a national trade association that represents 13 companies engaged in the production of food, feed, and renewable fuels from oilseeds, including soybeans, sunflower seed, canola, flaxseed and safflower seed. NOPA's member companies process more than 1.6 billion bushels of oilseeds annually at 63 plants located in 19 states throughout the country, including 57 plants that process soybeans.



North American Millers' Association (NAMA) represents millers of wheat, corn, oats and rye in the US and Canada. NAMA members take the raw grain and, through grinding and crushing, create flour and other products that are used to make such favorite foods as bread, pasta, cookies, cakes, and snack foods.



Attachment A

Michigan State University Technical Report

David M. (Max) Williamson

From: Kyle Harris <kharris@corn.org>
Sent: Friday, December 16, 2016 6:16 PM
To: David M. (Max) Williamson
Subject: FW: Your Comment Submitted on Regulations.gov (ID: EPA-HQ-OAR-2015-0355-0001)

From: Regulations.gov [mailto:no-reply@regulations.gov]
Sent: Friday, December 16, 2016 6:05 PM
To: Kyle Harris <kharris@corn.org>
Subject: Your Comment Submitted on Regulations.gov (ID: EPA-HQ-OAR-2015-0355-0001)



Please do not reply to this message. This email is from a notification only address that cannot accept incoming email.

Your comment was submitted successfully!

Comment Tracking Number: 1k0-8tmn-jax9

Your comment may be viewable on Regulations.gov once the agency has reviewed it. This process is dependent on agency public submission policies/procedures and processing times. Use your tracking number to find out the status of your comment.

Agency: Environmental Protection Agency (EPA)
Document Type: Rulemaking
Title: Prevention of Significant Deterioration and Title V Greenhouse Gas Permitting Regulations: Establishment of a Significant Emissions Rate for Greenhouse Gas Emissions under the Prevention of Significant Deterioration Program; Revisions
Document ID: EPA-HQ-OAR-2015-0355-0001

Comment:
Comment submitted by John Bode, Chair, Biogenic CO2 Coalition

Uploaded File(s):

- Biogenic CO2 Coalition - EPA Significance Rule Comments (12-16-16).pdf
- MSU Biogenic Carbon Study (final) (11-23-13).pdf

For further information about the Regulations.gov commenting process, please visit
<https://www.regulations.gov/faqs>.

BIOGENIC CO₂ COALITION

February 21, 2017

Members

American Bakers
Association

American Farm
Bureau Federation

Corn Refiners
Association

Enginuity Worldwide

National Corn
Growers Association

National Cotton
Council of America

National Cottonseed
Products Association

National Oilseed
Processors
Association

North American
Millers' Association

The Honorable Scott Pruitt
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.,
Washington, D.C. 20460

Re: Supporting American Agriculture by Removing Illegal Regulation of
Biogenic Emissions

Dear Administrator Pruitt,

The Biogenic CO₂ Coalition extends its congratulations on your confirmation as EPA Administrator. We look forward to working with you to restore confidence and certainty throughout the regulated community and to ensure EPA rules and actions are rooted in law and guided by science.

We respectfully request a meeting with you or other personnel you deem appropriate regarding critical EPA policy regulatory barrier that is thwarting development of the bioeconomy, which already accounts for \$393 billion in economic benefit and 4.2 million American jobs. Investment in the bioeconomy is now discouraged by an EPA policy interpretation which misreads its greenhouse gas endangerment finding implicating “excess CO₂” to include biogenic carbon from the processing or use of crops, oilseeds, crop residues, farm wastes and other agricultural feedstocks, a position without significant scientific or political support. Biogenic CO₂ emissions were neither considered nor mentioned in the original greenhouse gas endangerment finding. However, EPA has, through its suite of greenhouse gas regulations, refused to recognize that American farmers capture carbon when growing feedstocks that are turned into bioproducts, food, fiber, biofuels and bioenergy and later released as part of its natural carbon lifecycle.

As a result, the Biogenic CO₂ Coalition was forced to bring litigation against the agency in three cases now pending, and being held in abeyance, before the U.S. Court of Appeals for the D.C. Circuit, including a challenge to EPA’s Clean Power Plan, New Source Performance Standards for power plants, and its recent endangerment finding for aircraft emissions. On January 5, 2017, the Department of Justice contacted us expressing EPA’s desire to advance litigation of the aircraft endangerment finding. We respectfully submit that prompt policy action would dispense the need for further litigation and swiftly unleash billions of dollars in new private investment in American economic growth.

We understand you have many priorities to address and appreciate your consideration.

Best wishes for your success.

Sincerely,



American Bakers Association
www.americanbakers.org

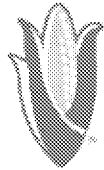


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OF AMERICA



NCPA

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Established 1911

NOPA
NATIONAL OILSEED
PROCESSORS ASSOCIATION



Appointment

From: Dravis, Samantha [dravis.samantha@epa.gov]
Sent: 3/28/2017 1:44:39 PM
To: Dravis, Samantha [dravis.samantha@epa.gov]; McGartland, Al [McGartland.Al@epa.gov]; Simpson, David [Simpson.David@epa.gov]; Kime, Robin [Kime.Robin@epa.gov]; Bolen, Brittany [bolen.brittany@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]
CC: Inge, Carolyn [Inge.Carolyn@epa.gov]; Irving, Verna [Irving.Verna@epa.gov]
Subject: Biofuels Report Call in no# [Ex. 6 Personal Privacy (PP)] Seven digit Conf. ext. [Ex. 6 Personal Privacy (PP)] Participant code: [Ex. 6 Personal Privacy (PP)]
Attachments: BRDB background.pptx
Location: 3513A

Start: 4/12/2017 7:00:00 PM
End: 4/12/2017 7:30:00 PM
Show Time As: Busy



May 15, 2017

Submitted via www.regulations.gov – Docket No. EPA-HQ-OA-2017-0190

Sarah Rees
Director
Office of Regulatory Policy and Management
Office of Policy
1200 Pennsylvania Avenue NW.
Washington, DC 20460

Re: Comments on “Evaluation of Existing Regulations,” 82 Fed. Reg. 17793 (April 13, 2017)

Dear Ms. Rees:

The National Alliance of Forest Owners (“NAFO”) welcomes the opportunity to submit this letter in response to the Environmental Protection Agency’s (EPA) request for comments on “Evaluation of Existing Regulations,” 82 Fed. Reg. 17793 (April 13, 2017). EPA specifically asks for comment on regulations that:

- (i) Eliminate jobs, or inhibit job creation;
- (ii) are outdated, unnecessary, or ineffective;
- (iii) impose costs that exceed benefits;
- (iv) create a serious inconsistency or otherwise interfere with regulatory reform initiatives and policies;
- (v) are inconsistent with the requirements of section 515 of the Treasury and General Government Appropriates Act, 2001 (44 U.S.C. 3516 note), or the guidance issued pursuant to that provision in particular those regulations that rely in whole or in part on data, information, or methods that are not publicly available or that are insufficiently transparent to meet the standard of reproducibility; or
- (vi) derive from or implement Executive Orders or other Presidential directives that have been subsequently rescinded or substantially modified.”

NAFO’s mission is to protect and enhance the economic and environmental benefits of private forests through targeted policy advocacy at the national level. At the time of this submission, NAFO’s members represent 80 million acres of private forests in 47 states. NAFO seeks to sustain the environmental, economic, and social values of forests and to assure an abundance of healthy and productive forest resources for present and future generations. America’s privately-owned forests are one of the country’s greatest resources. When managed properly for long-term productivity, they offer a wide range of benefits to our nation’s economy, energy portfolio, environment, and society. Policies that restrict markets or impose burdensome regulations can stifle these benefits or even eliminate them entirely if the land is converted to other uses as a result.

I. Biomass Regulations

Because they are a renewable resource, forests can be used repeatedly over time to produce a wide range of valuable forest products, including biomass feedstocks used for energy production, while also providing habitat for many wildlife species. Unfortunately, over the past six years, EPA's climate change policies have erected unnecessary regulatory barriers that prevent the development of new biomass energy on a level playing field with other domestic energy sources and inhibit the economic and job creation opportunities that would otherwise be realized. Because of the value that biomass energy provides throughout the forestry and forest products sectors, these regulatory barriers also impact forest products manufacturing, both directly and indirectly.

A. Energy and Economic Benefits of Biomass Energy

Biomass energy plays an important role in supporting strong forestry and forest products sectors. Biomass energy facilities provide a market for low-cost secondary products from harvesting operations and forest product manufacturing.¹ Moreover, forest products manufacturing facilities meet more than 65% of their energy needs from biomass, primarily manufacturing residuals but also logging residues. By providing a market for these feedstocks, biomass energy adds value to both forest owners and forest products manufacturers. Creating strong demand for biomass feedstocks and producing value that helps ensure the profitability of forest investments, biomass energy can play an important role in ensuring both the continued viability of the forestry and forest products sectors and the many jobs that they support and the retention of the land as forested, avoiding conversion to other uses.

Private forest owners have a long and successful track record of managing forests for long-term productivity and providing important economic benefits in rural areas. As a result of continual investments in productivity, forest owners have increased forest stocks while meeting an ever-growing demand for forest products. Based on the successful management strategies employed by NAFO's members and other private forest owners, U.S. forests have the capacity to maintain or even increase production for the foreseeable future, ensuring a consistent supply of forest products, including feedstocks for biomass energy.

The forestry and forest products sectors provide significant economic value, particularly in rural areas that may lack access to other high paying jobs. Indeed, in many cases, the forestry sector and forest products facilities—including biomass energy facilities—are among the most important employers for small, rural communities. Maintaining or expanding forestry-related jobs is critical to promoting economic growth in these communities. In many states with large rural areas, the forestry and forest products sectors, including biomass energy, are key economic drivers that are essential to the continued vitality of local communities. Nationwide, private forests support 2.4 million jobs and \$99 billion in annual payroll.²

¹ Kingsley, E., *Importance of Biomass Energy Markets to Forestry: New England's Two Decades of Biomass Energy Experience* (June 2012), available at [http://www.usendowment.org/images/Importance of Biomass Energy Markets to Forestry 6.2012.pdf](http://www.usendowment.org/images/Importance_of_Biomass_Energy_Markets_to_Forestry_6.2012.pdf); Innovative Natural Resources Solutions LLC, *Identifying and Implementing Alternatives to Sustain the Wood-Fired Electricity Generating Industry in New Hampshire* (Jan. 2002), available at http://www.inrsllc.com/download/wood_fired_electricity_in_NH.pdf.

² Forest2Market. "The Economic Impact of Privately-Owned Forests in the United States." 2016. http://nafoalliance.org/images/documents/task-groups/communications/Forest2Market_Economic_Impact_of_Privately-Owned_Forests_April_2016.pdf.

In order to promote economic growth in these areas, it is critical that the Federal government adopt policies that promote biomass energy by ensuring that there are no unnecessary regulatory barriers that prevent expanded development.

B. Congressional Recognition of Carbon Neutrality

In Section 428(2) of the Department of the Interior, Environment, and Related Agencies Appropriations Act, 2017, Congress directed the Administrator, the Secretary of the Interior and the Secretary of Energy to establish “clear and simple policies for the use of forest biomass as an energy solution, including policies that reflect the carbon neutrality of forest biomass and recognize biomass as a renewable energy source, provided the use of forest biomass for energy production does not cause conversion of forest to non-forest use.”

The scientific principles supporting carbon neutrality are well understood. Because forests are part of the natural carbon cycle, carbon from the atmosphere is sequestered in forests through photosynthesis and emitted through respiration, decomposition, and combustion. The dynamic processes of carbon sequestration and emission occur simultaneously on the landscape and form an ongoing cycle by which emitted carbon is sequestered. When forests are managed for long-term productivity—as they are in the United States—forest carbon stocks remain stable over time, ensuring that there is no net increase in carbon emissions from the forestry sector. In fact, EPA’s annual GHG Inventory has consistently shown that forests sequester more carbon than they emit each year.³

In response to this Congressional mandate recognizing the carbon neutrality of forest biomass, it is imperative that EPA adopt and implement a policy that promotes biomass energy as an important part of the nation’s energy portfolio. To ensure that biomass energy is promoted in accordance with Congress’ direction, EPA must adopt regulations and guidance that recognize biomass energy as a renewable energy source, allowing biomass energy to compete on a level playing field with other renewable energy sources. To do so, EPA must eliminate existing regulations and guidance that place unnecessary and unreasonable GHG-related compliance obligations on biomass energy that are not required for other types of renewable energy.

C. EPA’s Regulations and Guidance for Biomass Energy Have Created Unnecessary Regulatory Barriers for Forestry and Forest Products Sectors

Since 2010, EPA has issued a number of regulations and guidance documents that are inconsistent with Congress’ carbon neutrality mandate and that inhibit growth in the biomass energy sector. In order to comply with Congress’ directive and fully realize the economic benefits of biomass energy described above, EPA must withdraw these regulations and guidance.

³ See, e.g., EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014 ES-8 (2016) (“2014 GHG Inventory”), available at <https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf>.

First, in the 2010 Tailoring Rule, EPA, subjected carbon dioxide (“CO₂”) emissions from biomass energy facilities to preconstruction permitting requirements under the Clean Air Act Prevention of Significant Deterioration (“PSD”) program. As a result of these regulations, biomass energy facilities that trigger PSD permitting requirements must conduct a best available control technology (“BACT”) analysis for GHG emission. EPA subsequently issued guidance addressing BACT analyses for CO₂ emissions from biomass energy. While EPA agreed to reconsider the inclusion of CO₂ emissions from biomass energy facilities, it has not taken final action to address CO₂ emissions from biomass energy facilities under the PSD program. EPA’s failure to complete its review has contributed to substantial market uncertainty on the future of biomass energy.

Second, as part of the Tailoring Rule reconsideration process, EPA prepared and subsequently revised a draft Accounting Framework to address CO₂ emissions from biomass energy.⁴ EPA submitted each draft Accounting Framework to the Science Advisory Board (“SAB”) for review. The SAB’s review of the revised draft Accounting Framework is ongoing. Both the draft Accounting Framework and the SAB’s draft response include complicated processes for accounting for CO₂ emissions from biomass energy facilities that are unduly burdensome and inconsistent with Congress’ directive on carbon neutrality.

Third, EPA’s Acting Assistant Administrator for the Office of Air and Radiation issued a memorandum regarding CO₂ emissions from biomass energy facilities (the “McCabe Memo”).⁵ While appropriately recognizing the benefits of biomass energy, the memoranda also suggested that EPA should impose a sustainability requirement on the source of biomass feedstocks used for energy production. The introduction of an unexplained sustainability element on the source of biomass added to the uncertainty by shifting the agency’s focus from the impact to the atmosphere to the impact on the ground.

Fourth, in the Clean Power Plan, EPA included a similar sustainability requirement to treat biomass as a renewable energy source and imposed a series of other regulatory requirements that do not apply to other types of renewable energy. Again, these requirements are unduly burdensome and are inconsistent with Congress’ carbon neutrality directive.

Fifth, last year, EPA proposed to amend the Tailoring Rule to establish a “Significant Emission Rate (SER) for GHG Emissions Under the PSD Program.”⁶ The proposal would establish a threshold below which CO₂ emissions would be considered to have no more than a de minimis impact and thus not be subject to regulation under the BACT analysis. NAFO submitted comments urging EPA to amend the rule to consider emissions from the combustion of biomass as de minimis.

⁴ EPA, *Accounting Framework for Biogenic CO₂ Emissions From Stationary Sources*, available at *Accounting Framework for Biogenic CO₂ Emissions From Stationary Sources*; EPA, *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources*, available at [https://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/3235DAC747C16FE985257DA90053F252/\\$File/Framework-for-Assessing-Biogenic-CO2-Emissions+\(Nov+2014\).pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/02ad90b136fc21ef85256eba00436459/3235DAC747C16FE985257DA90053F252/$File/Framework-for-Assessing-Biogenic-CO2-Emissions+(Nov+2014).pdf).

⁵ Memorandum from Janet G. McCabe, Acting Assistant Administrator, EPA to Air Division Directors, Regions 1-10 re: Addressing Biogenic Carbon Dioxide Emissions from Stationary Sources (Nov. 19, 2014).

⁶ 81 Fed. Reg. 68,110 (Oct. 3, 2016)

Over the past eight years, NAFO has frequently provided comments to EPA that demonstrated the economic, energy, and environmental benefits of biomass energy and urged EPA to eliminate regulatory barriers that inhibit the biomass energy sector. The information in these comments provide further support to Congress' conclusions regarding the carbon neutrality of biomass energy and provide a basis for EPA to rescind the regulations and guidance that unnecessarily burden biomass energy. A list of relevant comments, which are hereby incorporated by reference, is provided below:⁷

- National Alliance of Forest Owners' Comments on Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, Docket EPA-HQ-OAR-2009-0517 (Dec. 28, 2009);
- NAFO, Call for Information: Information on Greenhouse Gas Emissions Associated With Bioenergy and Other Biogenic Sources; 75 Fed. Reg. 41173 (July 15, 2010) (Sept. 13, 2010);
- National Alliance of Forest Owners' Comments on "PSD and Title V Permitting Guidance for Greenhouse Gases," Docket: EPA-HQ-OAR-2010-0841 (Dec. 1, 2010);
- National Alliance of Forest Owners' Comments on "Listening Sessions on Greenhouse Gas Standards for Fossil Fuel Fired Power Plants and Petroleum Refineries," Docket: EPA-HQ-OAR-2011-0090 (Mar. 18, 2011);
- National Alliance of Forest Owners' Comments on "Deferral for CO2 emissions from Bioenergy and Other Biogenic Sources under the Prevention of Significant Deterioration and Title V Programs: Proposed Rule", 76 Fed. Reg. 15249 (Mar. 21, 2011) Docket EPA-HQ-OAR-2011-0083 (May 5, 2011);
- National Alliance of Forest Owners' Comments on "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Step 3, GHG Plantwide Applicability Limitations and GHG Synthetic Minor Limitations", 77 Fed. Reg. 14,226 (Mar. 8, 2012) Docket EPA-HQ-OAR-2009-0517 (Apr. 20, 2012);
- National Alliance of Forest Owners' Comments on "Standards of Performance for Greenhouse Gas Emissions From New Stationary Sources: Electric Utility Generating Units," Proposed Rule, 79 Fed. Reg. 1430 (Jan. 8, 2014) Docket EPA-HQ-OAR-2013-0495 (May 9, 2014);
- National Alliance of Forest Owners' Comments on "Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units," Proposed Rule, 79 Fed. Reg. 34,960 (June 18, 2014) Docket EPA-HQ-OAR-2013-0603 (Oct. 16, 2014);
- National Alliance of Forest Owners' Comments on "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Proposed Rule, 79 Fed. Reg. 34,830 (June 18, 2014) Docket EPA-HQ-OAR-2013-0602 (Dec. 1, 2014);
- National Alliance of Forest Owners' Comments on "Federal Plan Requirements for Greenhouse Gas Emissions From Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations," Proposed Rule, 80 Fed. Reg. 64,966 (Oct. 23, 2015) Docket EPA-HQ-OAR-2015-0199 (Jan. 21, 2016);
- National Alliance of Forest Owners' Comments on "Clean Energy Incentive Program Design Details," Proposed Rule, 81 Fed. Reg. 42,940 (June 30, 2016) Docket EPA-HQ-OAR-2016-0033 (Nov. 1, 2016);

⁷ Copies of these documents may be found at <http://nafoalliance.org/nafo-comments-biomass>.

- National Alliance of Forest Owners' Comments on "Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emission Rate (SER) for GHG Emissions Under the PSD Program," Proposed Rule, 81 Fed. Reg. 68,110 (Oct. 3, 2016) Docket EPA-HQ-OAR-2015-0355 (Dec. 16, 2016).

Based on NAFO's past comments and the information provided above, NAFO urges EPA to (1) exclude from NSR/PSD permitting requirements the CO₂ emissions from facilities that combust biomass for heat and/or energy, (2) withdraw all guidance related to PSD permitting for CO₂ emissions from facilities that combust biomass for heat and/or energy, (3) withdraw the revised draft Accounting Framework and related SAB charge, (4) withdraw the McCabe Memo, (5) rescind the biomass energy-specific requirements included in the Clean Power Plan and related proposals and (6) amend the SER rule to provide that all greenhouse gas emissions from the combustion of biomass are below the threshold where CO₂ emissions would be considered to have no more than a de minimis impact.

II. Waters of the United States

On March 6, 2017, EPA commenced a review of the regulations defining waters of the United States (WOTUS) under the Clean Water Act that were published at 80 Fed. Reg. 37054 (June 29, 2015) ("WOTUS rule").⁸ NAFO fully supports this effort. NAFO believes that the WOTUS rule is premised on erroneous interpretations of Supreme Court decisions and, as a result, indefensibly expands the definition of "waters of the United States." The WOTUS rule failed to do so by including confusing and ambiguous definitions that are likely to result in inconsistent decision-making by regulators, significant burdens for the forestry industry, and a proliferation of citizen suit litigation. We urge EPA to develop, with the U.S. Army Corps of Engineers (together "Agencies"), a revised rule that comports with governing legal authorities and provides the clarity that stakeholders need.

Forestry operations take place across vast areas of land, often in areas where rainfall is abundant and where wetlands, ditches, and ephemeral features pepper the landscape. Under the WOTUS rule, many previously non-jurisdictional water features will categorically be deemed "waters of the United States" under the new definitions of "tributary" and "adjacent." This categorical assertion of jurisdiction rests heavily on an improper expansion of the significant nexus test, which the Agencies interpret to allow for aggregation of all similarly situated waters. Such sweeping jurisdiction over ditches and ephemeral drainage, in particular, will have significant ramifications for private forest owners.

The WOTUS rule fails to elucidate reliable, objective criteria for identifying whether a given parcel of land contains jurisdictional waters. For example, forest owners will be unable to determine whether a seemingly isolated waterbody on their lands is located within a "riparian area" or "floodplain" of a jurisdictional water. Similarly, it will often be impossible for a forest owner to confidently distinguish between an excluded erosional feature and a jurisdictional ephemeral tributary. Absent reliable, objective standards, forest owners could be forced to prove that a particular waterbody is not jurisdictional. Such proof would necessarily involve forest owners trying to account for, among other things, extensive tributary systems, riparian areas, floodplains, and the extent of subsurface hydrologic connections that extend far beyond the

⁸ "Intention To Review and Rescind or Revise the Clean Water Rule," 82 Fed. Reg. 12532 (March 6, 2017).

boundaries of their lands. Making such a showing would be impractical and unaffordable for those forest owners who are carrying out normal silvicultural activities that do not produce sufficient financial returns to justify the analysis. This will result in the loss of the ability to manage lands and an incentive for forest owners to seek less benign uses for their land.

The categorical assertion of jurisdiction over all tributaries and adjacent waters, particularly ditches and ephemeral streams, poses a significant problem for forestry operations subject to best management practices. Designation of all of those features as jurisdictional waters will cause considerable confusion as to how forest owners will implement best management practices such as buffers along roadside ditches. Furthermore, the more waters that are defined as jurisdictional, the more opportunities there will be for allegations that certain activities involve point source discharges that are not exempted under CWA Sections 404(f) and 402(l).

For these reasons, NAFO urges timely completion of the WOTUS rule review.

III. Eliminate Unauthorized and Redundant Sustainability Procurement Mandates

In 2013, EPA released for public review and comment draft Guidelines intended to assist the Federal workforce in more consistently utilizing non-governmental product environmental performance standards and ecolabels in the Federal procurement process, consistent with Federal standards policy and sustainable acquisition mandates and commenced a pilot program.⁹ The statutes cited for this exercise contain no direction for general environmental performance standards or sustainable acquisition mandates.

President Obama then signed Executive Order (EO) 13693 on March 19, 2015.¹⁰ Among the issues addressed was sustainable federal procurement. The Council on Environmental Quality (CEQ) implementing instructions, issued on June 10, 2015, mandated that agencies must use specifications, standards, or labels recommended by EPA. EPA then issued interim recommendations in September 2015 with no public or stakeholder input and limited “sustainable” lumber procurement to materials certified under only one of the three nationwide forest certification programs with no justification or explanation. EPA then removed lumber from the recommendation table in December 2016 and indicated that the “sustainability” of lumber remains under review.¹¹

The U.S. Department of Agriculture (USDA) maintains Forest Inventory and Analysis (FIA) Program that collects data on forests throughout the country. This data shows that the area of American forests, both public and private, has been increasing since the 1980’s.¹² The

⁹ Draft Guidelines; Product Environmental Performance Standards and Ecolabels for Voluntary Use in Federal Procurement; Notice of Availability and Request for Comments, 78 Fed. Reg. 70938 (November 27, 2013).

¹⁰ 80 Fed. Reg. 15871 (March 25, 2015).

¹¹ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>.

¹² Oswalt, Sonja N.; Smith, W. Brad; Miles, Patrick D.; Pugh, Scott A.. 2014. Forest Resources of the United States, 2012: a technical document supporting the Forest Service 2015 update of the RPA

report states: "The most recent data available show a continuation of this upward trend across the country on both forest land and timberland."¹³ Thus our forests are more than sustainable; they are growing.

Congress originally established the USDA "BioPreferredsm Program" for federal procurement preferences and product labels in the 2002 Farm Bill¹⁴. 7 U.S.C. § 8102. One objective of the Program is to spur development of the industrial base through value-added agricultural processing and manufacturing in rural communities. In the 2014 Farm Bill, Congress amended the BioPreferred Program to "promote biobased products, including forest products, that apply an innovative approach to growing, harvesting, sourcing, procuring, processing, manufacturing, or application of biobased products regardless of the date of entry into the marketplace." 7 U.S.C § 8102(a)(3)(B)(vi). USDA then adopted regulations that established criteria for lumber, other wood products, pulp, paper, paperboard, and pellets to qualify under the program. 7 C.F.R. 3201.5(b)(2).

There is no reason, or statutory authority, for EPA to delve into an assessment of the voluntary, third party forest certification programs to divine which one meets some illusive standard of "sustainability." The FIA program demonstrates that our forests are stable and the BioPreferred Program provides the only forest product procurement criteria authorized by Congress. If EPA even retains this non-statutory voluntary standard assessment program, it should at a minimum recognize those programs which are authorized by law and accept the products recognized under those programs without additional process.

IV. Wetlands Delineation

In 1992, Congress directed the U.S. Army Corps of Engineers to utilize its 1987 National Wetlands Delineation Manual to identify wetlands subject to jurisdiction under section 404 of the Clean Water Act until such time as a final manual is adopted.¹⁵ The 1987 Manual "stresses the need for considering all three parameters (vegetation, soils, and hydrology) when making wetland determinations." Manual p. 3. The manual also notes that this is different than the Fish and Wildlife Service wetlands classification system, which only requires the presence of one parameter. Congress stepped in when the Corps issued a revised interagency manual in 1989 that relaxed the strict requirement that all three parameters be present, among other changes.

Rather than adopt a new Manual or guidance through a notice and comment process, the Corps has expanded its regulatory authority through regional "Supplements" that adjust the criteria for identifying wetlands. Thus the Supplements have created a moving target that allows for expansion for federal control over private lands. Yet the supplements have never been subject to subject to the rigors of a transparent rulemaking. Given EPA's "final administrative responsibility" for construing the term "navigable waters" under section 404 of the Clean Water

Assessment. Gen. Tech. Rep. WO-91. U.S. Department of Agriculture, Forest Service, Washington Office. Table 3, pp. 46-47.

¹³ *Id.*, p. 6.

¹⁴ Pub. L. 107-171.

¹⁵ Energy and Water Development Appropriations Act, 1993, Pub. L. No. 102-377.

Act, we urge EPA to work with the Corps to eliminate the regional Supplements and return to proper delineation of wetlands under the Manual.

V. Preserve Clean Water Act Nonpoint Source Funding Programs for State Agencies

EPA assistance grants provide critical support to states to take priority actions in managing nonpoint sources pollution, a responsibility specially left to the states by the Clean Water Act.¹⁶ These funds represent the cooperation in the “cooperative federalism” model. Of particular importance are the categorical grants for nonpoint source pollution management known as Section 319 funds. This funding allows states to address their highest priority issues relative to minimizing water quality issues from nonpoint sources (agriculture, forestry, stormwater, etc). Federal funds are matched by states at a rate of 60:40.

In fiscal year 2016, more than \$1.1 million of Section 319 funding was allocated to state forestry agencies to deliver priority water quality and best management practices (BMP) programs in a number of states. In addition, 319 grant funding in every state is used to supplement state forestry water quality-related priorities through urban and riparian tree planting, enforcement response of BMP violations, watershed-specific interventions, and more. EPA has long recognized the effectiveness of these state BMP programs and the importance of resource availability, including section 319 grants, to the state foresters who develop, implement and evolve these programs. We urge EPA to maintain the grants for these and the other vital programs funded through section 319 and other grant programs assisting state efforts to manage nonpoint source pollution.

Conclusion

We thank EPA for the opportunity to bring our concerns to your attention. We look forward to working with the agency to achieve workable and practical solutions to these issues that will support robust rural economies.

Respectfully Submitted,



David P. Tenny
President and CEO
National Alliance of Forest Owners

¹⁶ Clean Water Act sections 208 and 319, 33 U.S.C. §§ 1288 and 1329.

Appointment

From: Idsal, Anne [idsal.anne@epa.gov]
Sent: 10/8/2019 6:47:30 PM
To: Idsal, Anne [idsal.anne@epa.gov]; Harlow, David [harlow.david@epa.gov]; Grundler, Christopher [grundler.christopher@epa.gov]; Fawcett, Allen [Fawcett.Allen@epa.gov]; Irving, Bill [Irving.Bill@epa.gov]; Ohrel, Sara [Ohrel.Sara@epa.gov]; Tsirigotis, Peter [Tsirigotis.Peter@epa.gov]; Koerber, Mike [Koerber.Mike@epa.gov]; Mathias, Scott [Mathias.Scott@epa.gov]; Kornylak, Vera S. [Kornylak.Vera@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]; Baker, Sarah [baker.sarah@epa.gov]; Leopold, Matt (OGC) [Leopold.Matt@epa.gov]; Schwab, Justin [Schwab.Justin@epa.gov]; Srinivasan, Gautam [Srinivasan.Gautam@epa.gov]; Doster, Brian [Doster.Brian@epa.gov]; Greenglass, Nora [Greenglass.Nora@epa.gov]; Elman, Barry [Elman.Barry@epa.gov]; Dunham, Sarah [Dunham.Sarah@epa.gov]
CC: Curry, Bridgid [Curry.Bridgid@epa.gov]; Cory, Preston [Cory.Preston@epa.gov]; Steller, John [Steller.John@epa.gov]; Culligan, Kevin [Culligan.Kevin@epa.gov]; Bolen, Brittany [bolen.brittany@epa.gov]; Lovell, Will (William) [lovell.william@epa.gov]; Corrales, Mark [Corrales.Mark@EPA.gov]
Subject: FW: Biogenic CO2 Rulemaking Follow-up
Attachments: Scheduling Request: Biogenic CO2 Rulemaking
Location: WJC - N 5400 + Video with RTP + Ex. 6 Personal Privacy (PP)
Start: 10/8/2019 8:30:00 PM
End: 10/8/2019 9:30:00 PM
Show Time As: Tentative

-----Original Appointment-----

From: Idsal, Anne <idsal.anne@epa.gov>
Sent: Monday, October 7, 2019 4:37 PM
To: Idsal, Anne; Harlow, David; Grundler, Christopher; Fawcett, Allen; Irving, Bill; Ohrel, Sara; Tsirigotis, Peter; Koerber, Mike; Mathias, Scott; Kornylak, Vera S.; Vetter, Cheryl; Baker, Sarah; Leopold, Matt (OGC); Schwab, Justin; Srinivasan, Gautam; Doster, Brian; Greenglass, Nora; Elman, Barry; Dunham, Sarah
Cc: Curry, Bridgid; Cory, Preston; Steller, John; Culligan, Kevin
Subject: Biogenic CO2 Rulemaking Follow-up
When: Tuesday, October 8, 2019 4:30 PM-5:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: WJC - N 5400 + Video with RTP + Ex. 6 Personal Privacy (PP)



Scheduling
Request: Biogeni...

Message

From: Campbell, Ann [Campbell.Ann@epa.gov]
Sent: 10/7/2019 8:12:30 PM
To: Koerber, Mike [Koerber.Mike@epa.gov]; Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Subject: Scheduling Request: Biogenic CO2 Rulemaking

Thanks Mike. Will do.

Delaney, please add this to the calendar for this week, preferably NLT Thursday. Thank you.

Ann Campbell
Chief of Staff
EPA/Office of Air and Radiation
Office: 202 566 1370

From: Koerber, Mike <Koerber.Mike@epa.gov>
Sent: Monday, October 07, 2019 4:09 PM
To: Campbell, Ann <Campbell.Ann@epa.gov>; Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>
Cc: Smith, Darcie <Smith.Darcie@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Biogenic CO2 Rulemaking follow-up

Yes, that makes sense. And I would include Justin.

From: Campbell, Ann <Campbell.Ann@epa.gov>
Sent: Monday, October 07, 2019 4:07 PM
To: Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Cc: Smith, Darcie <Smith.Darcie@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: Biogenic CO2 Rulemaking follow-up

Peter, Mike – Anne would like to meet this week in preparation for next week's Administrator briefing. Should we use the same participants list as the meeting invite below (minus Matt and Brittany, but including Justin?)?

Thanks!

Subject: Biogenic CO2 Rulemaking follow-up
Location: WJC - N 5400 + Video with RTP + Ex. 6 Personal Privacy (PP)

Start: Wed 9/18/2019 1:30 PM
End: Wed 9/18/2019 2:30 PM

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Idsal, Anne
Required Attendees: Woods, Clint; David Harlow (harlow.david@epa.gov); Grundler, Christopher; Fawcett, Allen; Irving, Bill; Ohrel, Sara; Tsirigotis, Peter; Mike Koerber (Koerber.Mike@epa.gov); Mathias,

Scott; Kornylak, Vera S.; Vetter, Cheryl; Baker, Sarah; Leopold, Matt (OGC); Schwab, Justin;
Srinivasan, Gautam; Doster, Brian (Doster.Brian@epa.gov); Greenglass, Nora; Bolen, Brittany;
Elman, Barry; Dunham, Sarah

Optional Attendees:

Sorrels, Larry; Dominguez, Alexander; Gunning, Paul

Message

From: Manibusan, Mary [Manibusan.Mary@epa.gov]
Sent: 2/21/2020 8:51:00 PM
To: Bolen, Brittany [bolen.brittany@epa.gov]; Corrales, Mark [Corrales.Mark@epa.gov]
CC: Kloster, Andrew [Kloster.Andrew@epa.gov]; Yarbrough, John (Daniel) [Yarbrough.Daniel@epa.gov]; Nickerson, William [Nickerson.William@epa.gov]
Subject: RE: Biogenic
Attachments: SAN 6715 Biogenic CO2 - 2020-20-01 updated after EA and TSD- OP Review Summary.pdf

Enclosed is the updated 1-pager.

-----Original Message-----

From: Bolen, Brittany <bolen.brittany@epa.gov>
Sent: Friday, February 21, 2020 3:42 PM
To: Corrales, Mark <Corrales.Mark@epa.gov>; Manibusan, Mary <Manibusan.Mary@epa.gov>
Cc: Kloster, Andrew <Kloster.Andrew@epa.gov>; Yarbrough, John (Daniel) <Yarbrough.Daniel@epa.gov>
Subject: Biogenic

Hi,
OAR just informed me that we received an updated EA yesterday. Is that correct? When do we expect it could go to omb?
Thanks,
Brittany

Sent from my iPhone

Message

From: Lovell, Will (William) [lovell.william@epa.gov]
Sent: 10/29/2019 10:27:12 PM
To: Bennett, Tate [Bennett.Tate@epa.gov]; Bolen, Brittany [bolen.brittany@epa.gov]
Subject: RE: Biomass
Attachments: Biomass Three Rule Briefing Paper-10-29-19.docx

See attached!

-----Original Message-----

From: Bennett, Tate <Bennett.Tate@epa.gov>
Sent: Tuesday, October 29, 2019 5:22 PM
To: Bolen, Brittany <bolen.brittany@epa.gov>
Cc: Lovell, Will (William) <lovell.william@epa.gov>
Subject: Re: Biomass

Thanks in advance!

Sent from my iPhone

> On Oct 29, 2019, at 5:15 PM, Bolen, Brittany <bolen.brittany@epa.gov> wrote:
>
> Will,
> Can you send Tate the handout from today's 330 briefing with the administrator? Thanks.
>
> Sent from my iPhone

The next agenda item is the Quality Review of the draft SAB Review of EPA's Framework for Assessing Biogenic CO2 Emissions from Stationary Sources. Today will hopefully mark the end of a long journey for this review. EPA originally developed a framework for estimating biogenic CO2 emissions in 2011 that was reviewed by the Biogenic Carbon Emissions Panel and the SAB in 2012. EPA subsequently revised the framework and re-issued it in 2014. The Biogenic Carbon Emissions Panel was reconstituted and met multiple times between March 2015 and August 2017. I'm sure I also speak for EPA when I thank the Biogenic Carbon Emissions Panel on behalf of the SAB for their hard work and dedication to their tasks. The Panel presented a draft report in February 2016 to the SAB for quality review. The SAB quality review was conducted in March 2016; where the Board asked the Panel for more revisions. The revised draft report of June 2017 was reviewed by the Board in August 2017. The 2017 revision of the report was not approved by the SAB based on the deliberations of the quality review. Speaking broadly and in simple, general terms, there were two primary areas of contention the SAB had over the report. One was the time frame over which the carbon emissions should be accounted for. The Panel thought the time frame should be determined by physical inputs, like, for example, reforestation rates by considering the period over which ALL effects would take place, while the Board thought the accounting time frame had to be informed by policy considerations should be able to be determined by policy. For example, if EPA promulgates a rule that to achieve a desired outcome has to be implemented by 2050, the Board thought it was important to be able to account for CO2 emissions for the time period affecting that outcome before the target date, not at some future point specified by a regulation. The second general area of contention was in the model used to compute biogenic assessment factors (BAF) itself. The model the Panel advocated for incorporates biogeochemical and physical components as well as economic components and requires many assumptions and significant information to run. is more complex and detailed, requiring specific expertise to operate. The model the Board advocated for more transparency in the model inputs and outputs and for a model that could take into account uncertainty and be subject to sensitivity analysis ~~for is less complex, and able to be operated by people with less specific expertise.~~ At the August 2017 meeting, with significant remaining differences between the Panel and the SAB, the SAB ~~seriously considered abandoning the project altogether~~ efforts to respond to EPA's request for guidance on biogenic carbon. Ultimately, the SAB, but ultimately voted to continue with the project by tasking a group of SAB members to integrate portions of the Panel's report with information from the SAB reviews. ~~The report we are considering today is~~ report is a product of SAB's direct efforts and utilizes portions of the Panel's report. I want to note that this entire deliberative process that began in 2011 has followed the SAB's processes and charter, as well as Federal Advisory Committee Act procedures. All SAB deliberations have been made in the public's eye, with public input. Every step of this process can be followed by visiting the SAB website.

Independent of this review process, this past April, EPA issued a policy statement stating the agency will treat biogenic CO2 emissions resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral. The charge to the SAB to comment on the science underpinning EPA's Biogenic Carbon Emissions Framework is not changed by the policy statement from the Agency. As science advisors to the Agency, we undertake this review to provide our expert advice. This afternoon, we'll first hear public comments from the registered speakers. I also want to thank those that provided written comments. We have three sets of written comments from members of the Biogenic CO2 panel – one letter signed by four members, and two individual sets of written comments from two different panel members. Plus, we have written comments from various industry and environmental groups. After we hear oral comments from the registered speakers, Drs. Steve Hamburg, Dr. Bill Schlesinger, and Dr. Jeanne VanBriesen will give an overview of the report. Then, we'll hear from the lead reviewers, Dr. Rodney Andrews, Dr. Larry Monroe, and

Dr. Surabi Menon. Afterwards, the full SAB will have a discussion and decide the disposition of the report. The first public commenter is XXX.

DATE

EPA-SAB-19-xxx

The Honorable Andrew Wheeler
Acting Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Subject: SAB review of *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources* (2014)

Dear Acting Administrator Wheeler:

The EPA Science Advisory Board (SAB) was asked by the EPA Office of Air and Radiation to review and comment on its *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources* (2014) (“2014 Framework”). The 2014 Framework considers the scientific and technical issues associated with accounting for emissions of carbon dioxide (CO₂) from biogenic feedstocks used at stationary sources.

The purpose of the 2014 Framework was to develop a method for calculating the adjustment, or Biogenic Assessment Factor (BAF), for CO₂ emissions associated with the combustion of biogenic feedstocks at stationary facilities by accounting for the biological carbon cycle effects associated with growth, harvest, and processing of these feedstocks. The BAF is an accounting term developed by EPA to adjust stack emissions to reflect a feedstock’s *net* carbon emissions after accounting for subsequent sequestration of carbon in regrown biomass or soil, and after considering emissions that might have occurred with an alternate fate had the biomass not been used for fuel.

~~The SAB notes that EPA’s 2014 Framework may be used to develop BAFs for multiple regulations and associated climate objectives (e.g., total emissions versus temperature, etc.), and resulting regulations, and it therefore it must consider be able to accommodate a wide range of potential time and spatial scales and all relevant GHGs, and policy goals (i.e., total emissions versus temperature, etc.) in order to calculate specific BAFs. Lack of specificity in the BAF objectives to be addressed under the Framework applicable to that objective, making it difficult for the SAB to address many of the charge questions fully.~~

EPA’s 2014 Framework is a revision of its 2011 Framework, which the SAB previously reviewed. The SAB notes that the 2014 Framework incorporated some of the SAB’s prior advice and advanced the analytical foundation for making determinations about the net contribution of biogenic feedstocks to CO₂ in the atmosphere. Specifically, the 2014 Framework has incorporated the SAB’s prior advice as follows:

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- The 2014 Framework does not, however, provide the policy-regulatory context, specific BAF calculations for that context, or the implementation details the SAB previously requested. In fact, the lack of information in both Frameworks on how the EPA may use potential BAFs made it difficult to fully evaluate these frameworks. The BAF is a *construct* designed to evaluate the importance of the stack emissions of CO₂ at a given time relative to their climate impacts at some point in the future when some of the emitted CO₂ may have been sequestered by regrowth of biogenic feedstocks. As such, the computation of the BAF for a feedstock in a region depends upon the climate impact of concern and the future point in time that is of interest, which is a choice that depends upon the objective of interest-specific regulation or policy that will rely on that BAF. If the objective of interest for the BAF computation is defined by short term processes, then the relevant time-period for the BAF computation needs to be consistent include relevant details on short term climate phenomena, which might be less important if the objective of interest is much longer term. In addition to providing identifying details on the objective to inform the relevant analytic time frame, a policy-regulatory context knowing the objectives of interest would have provided other information necessary to the assessment of the science underpinning the BAFs, such as the scale of demand for biogenic feedstocks, and the anticipated time frame for that demand and eligible feedstocks to meet it, relevant spatial scope, and importance of including each type of GHG in the analysis. Policy-Regulatory choices are expected to affect actions taken in feedstock markets, and these anticipated actions affect the assumptions in the models used to compute the BAF.

Commented [SA1]: I suggest deleting the last sentence because it does not seem to relate to how the regulatory context affects the scope of the BAF calculation. It is true a factual matter but it does not further the point of this paragraph. Deletion is the easy fix, and it doesn't make a point on its own that seems important to the SAB's evaluation of the framework.

Commented [CT2R1]: Steve Hamburg will move this sentence.

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comport with the objective under consideration, which is generally ~~incorporated into dependent on the regulatory policy choice~~ regulation mandating use of that particular BAF. The Panel's previous reports remain available on the SAB [[HYPERLINK](https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebProjectsCurrentBOARD/3235DAC747C16FE985257DA90053F252?OpenDocument) "https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebProjectsCurrentBOARD/3235DAC747C16FE985257DA90053F252?OpenDocument"].

As we stated in our 2012 report and we reiterate here: this SAB review would have been enhanced if the Agency offered a specific regulatory application that, among other things, provided explicit proposed BAF objectives, which would in turn ~~calculations and have~~ defined the applicable boundaries regarding upstream and downstream emissions in the feedstock life cycles. The 2014 Framework lacks specificity and is written in a way that is too generic, with too many possibilities that would require assessment of different underlying science. Rather than offering a lengthy menu of calculation options, the EPA Framework needs to define its scenarios and justify those choices. This would enable the SAB to evaluate the science underpinning those decisions and justifications.

Despite this significant limitation, the SAB offers overarching suggestions for moving forward with a framework for assessing the BAFs of biogenic feedstocks. In addition we offer specific responses to EPA's charge questions when possible ~~and~~, the SAB offers general guidance regarding the calculation of BAFs. EPA's equations were based on emissions (fluxes) with some adjustment terms to account for carbon mass escaping the system between the point of assessment and the point of emissions. In the enclosed report, the SAB recommends an alternative formulation based on changes in terrestrial (non-atmospheric) carbon stocks (or pools) such as the live stocks in biomass, dead stocks, soil stocks, etc., that explicitly incorporates the principle of conservation of mass. While the carbon-stock-based accounting system results in a similar formula for BAF ~~similar as to that of the EPA's emissions-based~~ approach, it offers multiple advantages: the component stocks are regularly inventoried and modeled by the scientific community; the different stocks can be aggregated and rearranged as needed or further subdivided; and it is appropriately constrained by conservation of mass and therefore the ~~precision~~ validity of the results can be assessed using mass balance calculations. Although this alternative formulation provides these benefits, other important modeling issues remain. These include selecting appropriate temporal or spatial boundaries, considering variability among classes of feedstocks, accounting for non-CO₂ greenhouse gases such as nitrous oxide and methane, and quantifying stocks and fluxes that are difficult to measure or estimate.

Commented [SA3]: Something is wrong with this sentence, but I don't have enough knowledge of the prior versions to suggest edits to fix it.

As an additional caveat, the SAB is aware that the EPA report and this review are focused only on accounting for ~~carbon dioxide~~ CO₂ related to the use of biomass for electricity generation. Neither EPA nor the SAB evaluated other concerns like forest conservation, biodiversity, and ecosystem services. We offer this caution about the model boundaries as defined by EPA's method and identified in the SAB review. In addition, we recognize that biodiversity and ecosystem health are valid concerns worthy of a whole different analysis and ~~policy/regulatory policy~~ response.

Commented [SA4]: I think this is one of the few spots where "policy" is more appropriate than "regulatory"

Finally, EPA did not ask the SAB for feedback on its modeling approach. We think this was an oversight, given that modeling is critical to the development of the BAF and different modeling approaches can yield different results. The 2014 Framework employed an integrated model that captures economic and biophysical dynamics and interactions for some of its alternative BAF calculations; however, EPA did not offer explicit justification for its modeling choices derived from articulated criteria. In addition, the sensitivity of BAF responses to some underlying features of the model was not

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1 examined by the EPA or the SAB. Thus, we conclude EPA should identify and evaluate its criteria for
2 choosing a model or models and examine the sensitivity of BAF estimates to key modeling features.

3
4 The SAB appreciates the opportunity to provide advice on the 2014 Framework and looks forward to
5 your response.

6
7 Sincerely,
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Enclosure

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NOTICE

This report has been written as part of the activities of the EPA Science Advisory Board (SAB), a public advisory group providing extramural scientific information and advice to the Administrator and other officials of the Environmental Protection Agency. The SAB is structured to provide balanced, expert assessment of scientific matters related to problems facing the Agency. This report has not been reviewed for approval by the Agency and, hence, the contents of this report do not represent the views and policies of the Environmental Protection Agency, nor of other agencies in the Executive Branch of the Federal government, nor does mention of trade names of commercial products constitute a recommendation for use. Reports of the SAB are posted on the EPA Web site at [HYPERLINK "http://www.epa.gov/sab"].

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Science Advisory Board**

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Acronyms and Abbreviations

AVOIDEMIT	Avoided Emissions
BACT	Best Available Control Technology
BAF	Biogenic Assessment Factor
BAU	Business as Usual
CH4	Methane
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
DOE	Department of Energy
EPA	Environmental Protection Agency
FASOM	Forestry and Agricultural Sector Optimization Model
GHG	Greenhouse Gas
GROW	Term in EPA’s BAF equation representing net feedstock growth (or removals)
GWP	Global Warming Potential
PSD	Prevention of Significant Deterioration
N2O	Nitrous Oxide
SAB	Science Advisory Board
USDA	U.S. Department of Agriculture

1. EXECUTIVE SUMMARY

The EPA requested the SAB review a revised framework for accounting for biogenic carbon emissions, which the agency defines as “CO₂ emissions related to the natural carbon cycle, as well as those resulting from the combustion, harvest, digestion, fermentation, decomposition, or processing of biologically based materials.”¹ The goal of the 2014 Framework was to evaluate biogenic CO₂ emissions from stationary sources that use biomass feedstocks, given the ability of green plants to remove CO₂ from the atmosphere through photosynthesis. The 2014 Framework and its 2011 predecessor introduced the concept of a Biogenic Assessment Factor (BAF), which is the proposed adjustment for carbon emissions associated with the combustion of biomass feedstocks. The BAF is an accounting term developed in the Framework to denote the offset to stack emissions (mathematical adjustment) to reflect net carbon emissions after taking into account the sequestration of carbon in regrown biomass or soil, as well as emissions that might have occurred with an alternative fate had the biomass not been used for fuel.

Importance of Defining the Objectives through the Policy/Regulatory Context to Be Addressed by a BAF

The questions before the EPA in 2011 and presented for the SAB’s review, were whether and how to consider greenhouse gas (GHG) emissions and decisions about best available control technology (BACT) for CO₂ emissions from biomass feedstocks used for electricity generation at stationary facilities. EPA proposed to address this issue by defining a term, Biogenic Assessment Factor, intended to be used to assess effects *relative* to the desired objectives. The 2014 Framework, however, removed the policy/regulatory context, and did not include specific BAF calculations for any policy/regulatory context, or the implementation details the SAB previously requested. In fact, the lack of information in both frameworks on how the EPA may use potential BAFs made it difficult to fully evaluate these frameworks. Thus, evaluation of this construct for a science-based regulatory framework in the absence of the defined objectives is not useful. Rather than assume a set of objectives (articulated in a policy/regulatory context) or evaluate the charge questions across numerous putative objectives of interest, the SAB focused on providing input on considerations that affect the usefulness and scientific integrity of EPA’s approach.

Commented [SA5]: My edits here are just to better integrate Larry’s new parag (mainly rearranging text within this section). I like the added material by Larry because I think it helps a reader lacking the history of these deliberations to better understand the points that were being made here originally.

The SAB notes that Because the EPA’s 2014 Framework report does not identify the specific metric of climate impact (or “objective”) with resulting regulations that a BAF estimate should reflect, and further notes that BAFs that may be developed under the Framework could entail a wide range of objectives, e.g., temporal and spatial domains, total emissions, temperature, etc. While ideally it ~~may~~ would be desirable to identify a universal methodology that could be applied to any of a wide range of potential objectives, doing so poses exceptional technical challenges and the concept was not endorsed by the SAB. Thus, the lack of specificity in the 2014 Framework document regarding the objectives that BAFs under it are expected to ~~to be estimate/address~~ makes it very difficult for the SAB to assess whether the suggested types of models, data, and baselines suggested by the Framework are appropriate, and ~~thus has~~ limited the ability of the SAB to fully address some of the charge questions. We thus preface

Commented [SA6]: I added this based on what I think I’ve learned from reading sections above -- that the panel was more in favor of this concept than the SAB. If I have this history wrong, my edit here can be removed.

¹ [HYPERLINK "https://19january2017snapshot.epa.gov/climatechange/carbon-dioxide-emissions-associated-bioenergy-and-other-biogenic-sources_.html"]

the SAB's comments with this observation on the consequences of having made this revised 2014 Framework so general/specific with respect to its intended and potential applications. The SAB concluded that evaluation of EPA's plan for a science-based regulatory framework in the absence of defined regulatory objectives is not useful. Rather than assume a specific objective, or evaluate the change questions across numerous putative objectives of interest, the SAB has focused on providing input on considerations that affect the usefulness and scientific integrity of EPA's approach in general.

Region- and Feedstock-Specific Biogenic Assessment Factors, baselines and modeling

As recommended previously by the SAB, BAFs should be feedstock-specific and region-specific and not facility-specific. Facility-specific BAFs are conceptually and practically challenging to estimate due to the absence of well-defined spatial boundaries for feedstock supply to each facility and the role of market-induced effects on land use, on biomass production and market demand for fiber, and on carbon stocks across space. To obtain a region-specific BAF for feedstocks, it is necessary to address region-specific, feedstock-specific demand for biomass and to assess the impact of this increased demand for biomass on net carbon stocks. Changes in demand for biomass feedstocks should be assessed based on historical data on forest carbon stocks, resource use, and observed information on current and planned expansions to facilities using biomass feedstocks. *There is no single answer to what these BAFs should be, as not all biogenic emissions are carbon neutral nor net additional to the atmosphere, and assuming so is inconsistent with the underlying science.*

Projections of the interactions that must be assessed to compute a BAF can be obtained from diverse model types, from simple empirically and statistically-based models, to complex integrated assessment models that combine biophysical and economic factors. ~~The more complex the models may be necessary to capture key economic or physical phenomena required of a BAF, but more complexity can also, the greater the dependence of outputs on input assumptions and available data, which may limit the applicability/availability of these models to all relevant parties, make them challenging to understand, and make their results difficult to evaluate. This will be a fundamental challenge in developing acceptable BAF estimates for most types of objectives. However, for all model types,~~ sensitivity and uncertainty analyses are needed to adequately interpret the results and understand the dependency of the BAF on the choices and assumptions used as part of its computation.

Commented [SA7]: I feel strongly that the suggestion that complex models are more dependent on assumptions than less complex ones should be eliminated. The rest of my edits here are to fill in the gap with statements about complex models that are valid.

Commented [CT8R7]: Group suggests deleting this paragraph?

To compare changes in any system over time there must be a reference scenario (without increased demand for biomass feedstocks) against which to assess the net impacts on the variable of interest. In 2012, the SAB recommended a future anticipated baseline approach to capture the *additional* CO₂ emissions to, or uptake from, the atmosphere created by any increased use of biomass feedstocks for electricity generation. The EPA acknowledged this limitation of its earlier approach and included a future anticipated baseline analysis *along with* a reference point approach in its 2014 Framework. Both the future anticipated baseline and the reference point baseline (with regular updates) are challenging to apply due to data and modeling limitations.

Regardless of the baseline structure chosen (adjusted reference or future anticipated), validation and evaluation of the model used to compute the BAFs will be critical. Model validation is essential to

1 assessing any model's ability to replicate observed phenomenon over time, ensuring that simulations
2 based on the model ~~are appear capturing projecting expected logical and reasonable patterns of~~
3 ~~behavior in the system~~. Similarly, understanding model sensitivity to input parameters and assumptions
4 is important with respect to assessing model applicability over time. The model selected for estimating
5 BAFs should be reviewed and updated at regular intervals, capturing observed changes in economic and
6 land use conditions that may be due to increased biomass demand or other related conditions, as well as
7 the latest scientific information on biophysical and biogeochemical properties of feedstocks. The
8 appropriate review interval should be selected based on the timeframe of the ~~policy/regulatory~~
9 objective(s) as well as the timeframe associated with updates to the underlying data.

Commented [CT9]: Need to find some middle ground on this sentence.

Charge Question 1

Temporal and Spatial Scales

15 A sustained increased demand for biomass feedstocks by stationary facilities in a region is likely to
16 trigger changes in carbon stocks through one or more pathways that could generate a new (steady-state)
17 equilibrium stock of carbon that may be higher or lower than the current stock of carbon on the land.
18 The demand for biomass feedstocks for use in stationary facilities can affect carbon stocks by increasing
19 harvesting intensity for standing biomass, diverting biomass feedstocks from other non-energy products
20 and landfills, converting land from other uses to plant new biomass feedstocks for the future, and
21 utilizing biomass residues that might otherwise decay. Each of these responses may differ over time, and
22 thus, the overall effect of all these responses together on demand for biomass feedstocks may differ over
23 time. ~~Therefore, the time period selected for the analysis can strongly affect the assessed estimating the~~
24 ~~carbon stock or net carbon emissions impacts of an increased demand for biomass feedstocks by~~
25 ~~stationary facilities on carbon stocks and net emissions of carbon dioxide to the atmosphere can strongly~~
26 ~~affect that estimate.~~ The selection of the time period for assessment is not a purely scientific question,
27 but rather is closely and may be driven primarily by ~~associated with the objectives specified in the~~
28 ~~regulation associated with the use of that mandates use of BAFs to be estimated using this~~
29 ~~framework/policy/regulatory objectives being addressed by the application of a feedstock-specific and~~
30 ~~region-specific BAF to a facility(ies).~~ For example, consider an objective to limit peak planetary
31 warming versus an objective of controlling emissions of greenhouse gases in 2050: the same feedstock
32 in the same region could have widely varying impacts on terrestrial carbon stocks because the timeframe
33 defining the endpoint of the relevant analysis would differ. Since BAFs ~~are will~~ computed by assuming
34 ~~to serve specific policy/regulatory objectives,~~ there are no scientific criteria by which to pick a single
35 'right' timeframe for their determination independent of their ~~policy/regulatory~~ context (Ocko et al
36 2017).

Commented [CT10]: What is the subject?

Commented [CT11]: Delete

38 Stationary facilities require a continuous supply of feedstock, thus a landscape approach for accounting
39 of impacts on carbon stocks is more appropriate than a stand-level approach for ~~the this application LRA~~
40 ~~defines (stationary facility for energy production).~~ A landscape approach expands the boundaries of
41 analysis to include all effects and recognizes that there is uptake as well as loss of carbon associated
42 with the production of feedstocks concurrently occurring across the landscape. It is the overall balance
43 of losses and gains that determines carbon stock effects. Moreover, economic considerations will
44 determine the size of the landscape providing feedstocks over time and the potential for land-use
45 changes that can positively or negatively impact carbon stocks.

Stock-Based Accounting Preferred to Emissions-Based Accounting

Carbon accounting associated with determining BAFs should be based on changes in carbon stocks on the land rather than changes in carbon emissions (as used in EPA's 2011 and 2014 Frameworks). A key feature of using carbon stocks is that all terms can be readily aggregated or disaggregated, subject to validation via mass balance and an existing comprehensive system of empirical measurements is already in place for the US. The stock-based approach comports with the current conventions in carbon accounting, which essentially use input-output tracking of carbon throughout a system with well-defined boundaries. These stocks can be aggregated and rearranged as needed, and they are appropriately constrained by conservation of mass and therefore can be assessed and precision determined checked and precision can be determined for validity using mass balance calculations, in addition to other checks.

policy

Two Cumulative Biogenic Assessment Factor Approaches

The SAB recommends a cumulative carbon accounting metric; however, there are alternative ways to calculate cumulative BAFs. EPA's cumulative BAF (called BAF_T in the 2014 Framework) applied to stocks is one option, reflecting the carbon stocks at the end of the time horizon—specifically, changes in carbon stocks by time, T. One can also calculate a cumulative BAF that is based on the accumulation of annual differences in carbon stocks on the land over the time horizon until equilibrium is reached, here called BAF_Y. Until the implications of the differences are better understood, we support EPA's cumulative BAF approach, i.e., the difference in carbon stocks at the end of the selected time horizon.

Computing a cumulative BAF over any period of time requires accounting for the positive and negative impacts on stocks over time to determine the net effect on those stocks. A cumulative BAF is preferable to an instantaneous (or annual) BAF because the use of biomass feedstocks can cause changes in carbon stocks that manifest beyond the period in which the feedstock is consumed by a stationary facility. There are two alternative approaches to calculating a cumulative BAF and the implications of these different approaches should be further considered. Until the implications of the differences are better understood, we support EPA's cumulative BAF approach as applied to stocks, i.e., the difference in carbon stocks at the end of the selected time horizon. A second approach was developed by members of the Biogenic Carbon Emissions Panel; it considers the time course of CO₂ emissions by accumulating the annual differences in carbon stocks on the land over the time horizon until equilibrium is reached. By accumulating annual differences across the projection period, the alternative cumulative BAF metric (which the panel designated as BAF_Y) attempts to incorporate "residence time" in the sense that it is a proxy for the length of time carbon stays in the atmosphere until it is modified by changing stocks of carbon on the land. While intended to generate a single BAF term at the end of the selected time horizon, either computation can be evaluated at any time of interest.

Charge Question 2

Scales of Biomass Use and Modeling Approach

Projections for aggregate demand for all biomass changes should be bounded by historical data on resource use, observed information on current and planned expansions to facilities using biogenic

Commented [SA12]: It seems an entire section was deleted here between Sunday evening's draft and Larry's version. I've just copied it back in below from the Sunday version, and I've made no edits to it from the Sunday night version. I think Larry had said he was going to try to clarify this paragraph a bit, but if so, we'll need to get them from him – they aren't in this version.

Commented [CT13R12]: Should precision be deleted in this spot?

Commented [CT14]: Steve please review

feedstocks, and reasonable projections of cost-effective deployment of biomass feedstocks for meeting the energy/feedstock needs of stationary facilities.

In addition, regular retrospective evaluations of observed levels of demand and the mix of feedstocks would enable revisions to EPA's estimates of feedstock demand. Retrospective evaluations of BAF performance will be important for understanding how effective the modeling has been in predicting what occurred. Thus, projections about biomass feedstock demand should be revised based on actual observations, and these updated demands should be used to inform modeling that generates BAFs.

Recommendations

As we have observed above, a sound ~~An accurate~~ biogenic carbon accounting approach ~~utilizing for estimating BAFs Biogenic Assessment factors will vary depending on the specific regulatory objectives for those BAFs, which are yet to be defined. Recognizing this limiting factor in the SAB's ability to review the 2014 Framework, we make the following recommendations for their development, which depend upon the policy/regulatory context, particularly in selection of the time horizon and geographic scope.~~

2.1 EPA should identify and evaluate its criteria for choosing a model and modeling features that affect BAF results. EPA should explore the sensitivity of BAFs to different modeling approaches, assumptions, transaction costs, and uncertainties in model input parameters.

3.2 Stationary facilities require a continuous supply of biomass feedstocks, thus a landscape approach is ~~appropriate and likely most reliable~~ required for accounting for the impacts of feedstock demand on carbon stocks.

4.3 The estimate of the direction and magnitude of the impact of using biogenic feedstocks in stationary facilities on terrestrial carbon stocks depends on the time horizon considered. There is no single optimal time horizon for evaluating these impacts, and it may be primarily determined by the regulatory context ~~ion-mandating use of BAFs.~~

Commented [CT15]:

5.4 Changes in carbon stocks (e.g., live and dead biomass, soil, products, material lost in transport and waste), should be used to account for biogenic carbon, rather than an emissions (flux-based) approach.

6.5 The SAB suggests exploration of two cumulative BAF metrics. Until the implications of the different metrics are clear, the SAB recommends using the metric proposed by EPA, i.e., net changes in stock over a specified time.

2. INTRODUCTION

2.1. Background

EPA's Science Advisory Board (SAB) was asked by the EPA Office of Air and Radiation to review and comment on its *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources* (U.S. EPA 2014).

The purpose of the 2014 Framework was to develop a method for calculating the adjustment, or Biogenic Assessment Factor (BAF), for CO₂ emissions associated with the use of biogenic feedstocks in stationary facilities, taking into account the biological carbon cycle associated with the growth, harvest, and processing of plant biomass. This mathematical adjustment to stack emissions is needed because of the unique ability of biological systems to sequester CO₂ from the atmosphere through photosynthesis in living biomass, to sequester carbon in dead biomass and soil, and to release CO₂ through respiration and biologically-mediated decay of organic matter. These attributes of ecosystems mean that there can be wide variation in the net effect of using biomass feedstocks in stationary facilities on emissions of carbon dioxide to the atmosphere and thus it is scientifically indefensible to assume all bioenergy has no net carbon dioxide emissions to the atmosphere, or the reverse, that all emissions represent a net addition to the atmosphere. The ~~Biogenic Assessment Factor~~ BAF is an accounting term developed in the Framework to estimate the net CO₂ emissions to the atmosphere over a specified period of time associated with burning biomass feedstocks to produce energy. These net emissions reflect the changes in carbon stocks of above and below ground biomass (live and dead), soils, and wastes. The 2014 Framework is a revision of the 2011 Framework (U.S. EPA 2011), which the SAB previously reviewed (U.S. EPA SAB 2012).

The EPA's charge to the SAB (Appendix A) requests advice and recommendations on its revised 2014 Framework, which was developed with consideration of the SAB's 2012 recommendations as well as the latest information and input from the scientific community and other stakeholders. The EPA asked the SAB to review and offer recommendations on specific technical elements of the 2014 Framework for assessing the extent to which the production, processing, and use of biogenic feedstocks at stationary facilities results in net emissions of CO₂ to the atmosphere so that it could be quantified through calculation of a BAF. ~~The 2014 Framework does not, however, provide the policy/regulatory context, specific Biogenic Assessment Factor calculations for that context, or the implementation details the SAB previously requested. In fact, the lack of information in both Frameworks on how the EPA may use potential BAFs made it difficult to fully evaluate these frameworks.~~

Commented [SA16]: just moving this text to integrate it with Larry's added parag below.

To conduct the present review, the SAB Staff Office reconstituted the Biogenic Carbon Emissions Panel (Appendix B), which had reviewed the 2011 Framework. That panel met multiple times between March 2015 and August 2017. The Panel presented a draft report (February 2016) to the SAB for quality review. The SAB quality review was conducted in March 2016; this quality review resulted in requested revisions from the Panel. The revised draft report (June 2017) was reviewed by the Board in 2017. The 2017 revision of the report was not approved by the SAB based on the deliberations of the quality review. The present report is a product of SAB's direct efforts and utilizes portions of the Panel's report. Previous drafts of the Panel's report are retained on the SAB website and available [[HYPERLINK](https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebProjectsCurrentBOARD/3235dac747c16fe985257da90053f252!OpenDocument&TableRow=2.2) "https://yosemite.epa.gov/sab/sabproduct.nsf/LookupWebProjectsCurrentBOARD/3235dac747c16fe985257da90053f252!OpenDocument&TableRow=2.2" \l "2."].

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The 2014 Framework does not provide the regulatory context, specific BAF calculations for that context, or the implementation details the SAB requested in its review of the 2011 Framework. That is, The SAB notes that EPA's 2012 Framework report does not identify the specific metric of climate impact (or "objective") that a BAF estimate should reflect, and further notes that BAFs that may be developed under the Framework could entail a wide range of objectives, depending on the regulation or policy-specific approach that would require use of a BAF. (For example, some regulations may impose objectives related to different time horizons than others; similarly, under some regulations the BAF may need to address a temperature impact objective, while other regulations may impose a net CO₂ emissions objective.) ~~Any BAF must be estimated using a model that has the scope and temporal detail necessary to simulate the key economic, emissions and atmospheric phenomena relevant to predicting that BAF's objective.~~ Lack of specificity in the Framework document regarding the objectives to be estimated makes it very difficult for the SAB to assess whether the suggested types of models, data, and baselines are appropriate. While it would, in this situation, be desirable to identify a universal modeling methodology that could be applied to any of a wide range of potential objectives, this poses significant new analytical and data challenges on the Framework, and the SAB is not endorsing such an approach. Thus, we note as a preface to this set of SAB comments that a consequence of having made the 2014 Framework so general in its potential applications is that it has ~~also limited the ability of the SAB's~~ ability to fully address some of the charge questions presented to it for this review. We thus preface the SAB's comments with this observation on the consequences of having made this revised 2012 Framework so general in its potential applications.

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3. OVERARCHING COMMENTS

This section addresses issues that lie outside the scope of EPA's charge questions, but which the SAB considered critical to place the responses to the charge questions in context. The charge questions are narrowly focused on specific technical aspects in the structure of the 2014 Framework. However, the SAB had important general advice regarding the Framework. This first section outlines that advice.

3.1. Defining Objectives through the Policy/Regulatory Context

For its review of the 2011 Framework, the SAB requested and was given a policy/regulatory context for use of BAFs that would result from the biogenic CO₂ accounting framework. The SAB was told that the 2011 Framework was intended to guide the determination of CO₂ emissions from regulated stationary sources under the Clean Air Act, specifically those facilities receiving a prevention of significant deterioration (PSD) air permit and that were required to conduct a best available control technology (BACT) analysis for CO₂ emissions. The question before the agency, and hence the SAB, was whether and how to consider biogenic greenhouse gas (GHG) emissions in reaching thresholds for permitting and decisions about BACT for CO₂ emissions from the use of bioenergy in stationary facilities.

The agency has removed this policy/regulatory context from its 2014 Framework, and the EPA's charge questions seek general guidance on issues related to the choice of temporal, spatial and production scale for determining BAFs in a policy/regulatory-neutral context. In the absence of a specific policy/regulatory context, which would provide define the objectives against that which the a BAF will be evaluated/must estimate, this the SAB limited its review was limited to providing general comments about how to consider the questions posed. More specific answers to the questions posed will vary with the objective (as defined by the policy/regulatory context), most notably the appropriate time period over which to determine the net biogenic emissions, and to a lesser degree, the appropriate geographical scale for consideration.

A policy/regulatory context with explicit objectives would clarify if the proposed procedures for determining the BAF will need to account for the emissions of all greenhouse gases that alter the climate. If this is the case, then it will be important that the analytic methods described by the Framework to account for the effect of biogenic feedstocks on non-CO₂ gases such as N₂O and CH₄ and to examine how the emission or uptake of these gases differ across space, time, and feedstocks, and to examine how these gases influence BAFs. Given the large difference in the mean residence time of these gases in the atmosphere, their relative importance can vary widely over different time horizons. If the climate impacts over 20 or 40 years is of concerns the objective, then methane and carbon particulate emissions could be very important, while if the objective's period of concern is hundreds of years, their importance will drop significantly (Shoemaker, et. al., 2013). Non-CO₂ gases are particularly important for feedstocks grown with nitrogen fertilizer and for waste materials from landfills.

As an additional caveat, the SAB is aware that the EPA report and this review are focused only on accounting for carbon dioxide related to the use of biomass in stationary facilities for energy generation. Neither EPA nor the SAB evaluated other concerns like forest conservation, biodiversity, and ecosystem services. If, for example, biomass pellets were sourced from old growth forests, this would pose unique risks that would not be reflected in a BAF calculated for net effects on carbon dioxide. We offer this

caution about the model boundaries as defined by EPA's method and identified in the SAB review. In addition, we recognize that biodiversity and ecosystem health are valid concerns worthy of a different analysis and policy/regulatory response.

Recommendation

- * ~~Biogenic Assessment Factors~~BAFs will vary depending on their specific objectives for their development, which will depend upon the policy/regulatory context, particularly in selection of the time horizon and geographic scope. Thus, future efforts to define specific biogenic accounting factors should be conducted in a policy/regulatory-specific context, with the objectives and relevant time frame specified.
- It is inappropriate to use default assumptions, including assuming there are no net emissions or that all emissions are additive.

Commented [SA18]: This seems like a separate recommendation, so suggest separating it into a second bullet.

Commented [CT19R18]: Copy to Executive Summary Both bullets are needed

3.2. Baseline Approach

To compare change in any system over time, there must be a baseline scenario against which to assess changes, in this case, changes due to demand for biogenic feedstocks; a baseline allows different scenarios to be compared. In the 2011 Framework, the EPA assesses the estimated net change in land-based biogenic CO₂ fluxes and/or carbon stocks between two points in time, with the first time point called the reference point. In the 2012 SAB report, we noted temporal problems with the reference point baseline approach. The EPA has acknowledged this in its 2014 Framework and included a future anticipated baseline analysis alternative along with a reference point baseline approach. The 2014 framework notes that the choice of baseline (reference point or anticipated) depends on the question to be answered and the specific context in which the framework is applied.

The SAB's 2012 advice on the anticipated baseline approach explored the use of complex modeling in order to try to capture interactions among the market, land use, investment decisions, and emissions and ecosystem feedbacks, and to construct a counter-factual scenario that does not include increased bioenergy use. In the case of long rotation feedstocks, biomass feedstock demand can affect carbon stocks in many ways including the age of trees harvested, the diversion of forest biomass from traditional forest product markets to bioenergy, and the rates of afforestation and deforestation. Estimating the net effect of these changes on carbon stocks requires a model that integrates market demand and supply conditions with biophysical conditions that determine growth of forest biomass, losses via decomposition, carbon sequestration and fluxes due to harvests and land use change and incorporates the spatial variability in these effects across the U.S. The complexity of such a modeling approach can make it difficult to parameterize and validate, and thus poses a significant challenge for use in any context. Extra effort will be needed to provide the public with thorough and requires a sensitivity analysis/analyses of parameters and model assumptions, and explicit recognition of model uncertainties in resulting BAF estimates. The lack of empirical data regarding many of these relationships and the resulting uncertainties pose a significant challenge to use of this type of model in a regulatory context.

Also, consistent with the SAB's 2012 recommendations, the EPA has now moved toward a "representative factor" approach that would include an assessment of the biogenic landscape attributes

(type of feedstock, region where produced). The EPA initially considered calculating a BAF for an individual stationary facility; however, the data needs for a facility-specific approach are daunting if they are to be accurate (e.g., case-specific measurements and calculations of carbon stocks and chain-of-custody carbon accounting, integration of land use changes on a broader landscape level). EPA's use of a representative factor approach is an advance in its accounting methodology, although overly-broad feedstock categories may not reflect important extant or likely future variation in feedstock production or processing (e.g., roundwood in the Southeast, logging residues in the Pacific Northwest, and corn stover in the Corn Belt). The overall approach is a positive development, but caution is required to ensure such inclusiveness does not produce unintentionally negative outcomes, e.g. feedstocks with large net emissions to the atmosphere lumped together with those with more limited net emissions. The EPA should evaluate the "representativeness" of the factors and refine the approach over time with additional data.

As stated in the SAB's 2012 report, there are tradeoffs between ease of implementation (transaction costs), ~~precision-generalizability~~ (getting it right at every location), accuracy (getting the overall stock change correct), and ~~policy/regulatory~~ effectiveness (ensuring that the ~~policy/regulatory~~ objectives are being met). The SAB continues to recognize the difficulty of undertaking the recommended anticipated ~~future~~ baseline approach, and practicality should be an important consideration in the agency's decision making. While the reference point baseline approach has significant limitations as noted in the SAB's 2012 report, these might be ~~overcome/mitigated~~ if regular updating with empirical data to capture regional carbon stock changes (increases or decreases) were employed. All methods considered should be subject to an evaluation of the costs of implementation and compliance and weighed against any increase in accuracy ~~and precision~~ that they might yield. Ultimately it is critical that there is a balance ~~among these considerations between accuracy and minimization of implementation costs.~~

Commented [SA20]: was "precision" exactly the word use in the 2012 report for "getting it right at every location"? If so, my suggested rewording cannot be used, but that is sure not the definition of "precision".

Recommendation

- The EPA should identify and evaluate its criteria for choosing a model and its underlying assumptions with regards to how these criteria and assumptions affect ~~the robustness and reliability of~~ calculated representative BAFs. In addition, the EPA should periodically update and validate the selected model to incorporate the latest scientific knowledge while ensuring that the model outputs are consistent with empirical observations (e.g. shifts in measured carbon stocks as determined the Forest Inventory Analysis program). Any model chosen should be subject to sensitivity analysis to evaluate its efficacy under different conditions and to identify data needs and prioritize future research.

3.3. Alternative Fate Approach for Waste-Derived Feedstocks

In 2012, the SAB recommended that the EPA consider alternative fates (i.e., if not used as fuel for electricity generation or process heat) of waste-derived feedstocks diverted from the waste stream, e.g., whether these feedstocks might decompose over a long period of time, whether they would be deposited in anaerobic landfills, whether they would be diverted from recycling and reuse, etc. In the 2014 Framework, the EPA has conducted extensive ~~alternative~~ fate calculations; however, the agency drew a narrow boundary around point source emissions and neglected other significant considerations that affect the GHG footprint of alternative municipal solid waste management scenarios. Specifically, the EPA neglected to quantify a potential ~~alternative~~ fate of municipal solid waste through landfill-derived

methane combustion. Under the Clean Air Act New Source Performance Standards, the EPA requires landfills above a certain size to, at a minimum, collect and control landfill gas (e.g., through flaring or use). As such, a baseline of direct venting is misleading, although almost all these facilities are likely to produce large emissions of methane, even when in compliance with current regulations (Lamb et al 2016: [HYPERLINK "file:///C:/Users/tcarpent/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/9EYAZ1S8/www.epa.gov/lmop/basic-information-about-landfill-gas"]). The relative rankings of BAFs across waste treatment options assessed in the 2014 Framework might change considerably if a more complete accounting were undertaken (e.g., energy recovery from landfill-derived methane and combustion of waste, and carbon storage associated with landfills.)

3.4. Temporal and ~~spatial~~-Spatial considerations in Biogenic Assessment Factor Calculations

The goal of the EPA Framework reviewed is to account for effects of biomass feedstocks used for energy generation at stationary facilities on terrestrial carbon stocks. BAFs are a carbon accounting method based on expected future changes in carbon stocks (measured in tons of carbon). They are designed to assess the net contribution of CO₂ from a stationary facility that uses biomass feedstocks, due to shifts of terrestrial carbon to and from the atmosphere over a specified period of time. The time scale selected will vary depending on ~~policy/regulatory~~-defined objectives (e.g., reduction of GHG emissions in 2050 or 2100, or ~~minimizing~~ limiting global temperature change resulting from greenhouse gas emissions). Over the selected time period, all greenhouse gas impacts (not just CO₂) – both positive and negative – should be accounted for (as completely as is feasible).

Commented [LSM21]: Maybe limiting global temperature change?

Commented [CT22R21]: accepted

Stationary facilities require a continuous supply of feedstock, thus a landscape approach for accounting of impacts on carbon stocks is more appropriate than a stand-level approach for the application EPA defines (stationary facility for energy production). A landscape approach expands the boundaries of analysis to include all effects and recognizes that there is uptake as well as loss of carbon associated with the production of feedstocks concurrently occurring across the landscape. It is the overall balance of losses and gains that determines carbon stock effects. Moreover, economic considerations will determine the size of the landscape providing feedstocks over time and the potential for land-use changes that can positively or negatively impact carbon stocks. As noted by Cintas et al. (2016), “assessment at the landscape scale integrates the effects of all changes in the forest management and harvesting regime that take place in response to – experienced or anticipated – bioenergy demand. Taken together, these changes may have a positive, negative or neutral influence on the development of forest carbon balances.” Landscape level accounting of effects of forest-based feedstocks on carbon stocks can result in a net gain or loss of carbon stocks in the near to medium term; a carbon debt could be followed by a carbon dividend or the other way around.

BAFs are a carbon accounting tool for assessing CO₂ emissions from facilities that consume biomass feedstocks for production of energy and are not life cycle assessments of net greenhouse gas emissions or their climate change effects. The distinction is that not all indirect systemic effects are considered in the BAF, nor are all GHG effects included. We also underscore our caution that the net accumulation of forest and soil carbon over time should not be assumed to occur automatically or to be permanent; rather, growth and accumulation should be monitored and evaluated for changes resulting from management, ~~policy/regulatory~~ efforts, market forces, or natural causes. If such monitoring demonstrates

changes that are not included in the model used to develop the BAF, the BAF should be updated to align with the empirical data.

Recommendation

- Stationary facilities require a continuous supply of feedstock, thus a landscape approach is appropriate and likely most reliable required for accounting for the impacts of feedstock demand on carbon stocks.

RESPONSES TO EPA'S CHARGE QUESTIONS

3.5. Temporal/spatial Scale for Biogenic Accounting

Charge Question 1: What criteria could be used when considering different temporal scales and the tradeoffs in choosing between them in the context of assessing the net atmospheric contribution of biogenic CO₂ emissions from the production, processing, and use of biogenic material at stationary sources using a future anticipated baseline?

There are several key factors that impact the dynamic nature of the BAF for a specific feedstock and region. The first is that the increased demand for biomass feedstocks in a region could potentially be met by a variety of sources obtained from the agricultural and forestry sectors, including annual and perennial agricultural crops, short rotation woody biomass and pulpwood, and crop and forest residues. Any increase in demand might involve using a larger proportion of an existing resource or diversion from non-energy products and landfills, converting land from other uses to growing biomass feedstocks, changing use of existing feedstocks, utilization of residues that would otherwise decay over some period of time. The effect of increased demand for biomass feedstocks on carbon stocks will depend on the mix of these feedstocks demanded and the scale of demand for these feedstocks.

Second, different biomass sources have different effects on carbon stocks over different timeframes. The plant systems, e.g. forests, agronomic systems, producing feedstocks differ in their rate of growth/regrowth, yield, potential to sequester carbon in biomass and soils, decay rates after harvest, and the type of land-use change that accompanies their production. These effects continue after the feedstock has been consumed by a stationary facility. We therefore recommend computing a cumulative BAF over the relevant time horizon. This cumulative BAF would be based on the difference in carbon stocks between a scenario without change (either computed using a reference point or anticipated baseline) and the increased biomass feedstock demand scenario and would vary with the time horizon selected by the objective in the relevant policy/regulations.

Key principles for calculating changes in the net carbon stocks should include: (1) the positive and negative impacts of demand for biomass over time, (2) a system-wide (landscape and economy) approach to account for direct and indirect effects, and (3) consistency across each region. Selecting different time horizons for different feedstocks being used to meet the same policy/regulatory objective would be inappropriate as it would yield inconsistent effects.

Determining the scale of appropriate regions for calculating BAFs will require balancing similarity in the biophysical characteristics, similar growing conditions (growing season length, vegetation type) and economic factors, biomass demand, with ensuring that the edge to volume ratios of the regions are small enough to ensure minimizing incentives to manipulate the movement of biomass feedstocks among regions due to differing BAFs.

To fully account for all positive and negative terrestrial effects over time, we recommend using the “emissions horizon” as described by the 2014 Framework applied that is determined to be relevant by the to a specific policy regulatory objective. As defined by the EPA, this “emissions horizon is the period of time during which the carbon fluxes resulting from actions taking place today actually occur ...” (U.S. EPA 2014). If the objective associated with for a given BAF is to have an effect on greenhouse gas emissions by a certain date, then the impacts aggregated by that date are the relevant metric to assess meeting the objective, and that date is the appropriate time horizon under which to end the BAF is calculated. Accordingly, there is no single time horizon that will effectively address all policies or feedstocks since feedstock net effects are time-dependent and desired objectives for policy regulatory changes target different time horizons. The SAB does not support a single time horizon as appropriate for determining estimating BAFs, because the computed values can vary significantly over differing time horizons and different objectives will be met over different time horizons.

Commented [CT23]: changes

The Panel suggested that the time horizon should be the length of time it would take for the effect of increased demand for biogenic feedstock on the carbon cycle to reach a steady-state. This occurs when the difference in carbon stocks between the increased biomass feedstock demand scenario and the business-as-usual scenario is no longer changing or when the difference is approaching an asymptote. This could result in a very long time horizon being selected for the BAF calculation, potentially hundreds of years if all feedstocks across all regions were to be included. The selection of such a time horizon would mean that for policy regulatory objectives with shorter time horizons (e.g., meeting a 2050 emissions target), the accounting would not align with relevant effects of biomass feedstock use at stationary sources on the policy regulatory objective. Whether it would be appropriate to use a model that can estimate effects over a much longer time horizon to estimate a BAF requiring a with a shorter time horizon will depend on whether that model can produce reasonable estimate of impacts at the nearer term point in time as well. mulates the relevant nearer term interactions with sufficient detail to produce reasonable estimates of impacts at nearer term (interim) points in time as well as over the longer horizon.

Commented [SA24]: the point of adding this sentence is to make it clear that this discussion about time horizons is about the calculation of the BAF and not about the model that can be used. One of my major concerns on my first review of this document was that the section seemed to be about model horizons, not the time period over which a calculation of BAF is made. I will be mollified on my concern if we can add this one sentence.

Commented [CT25R24]: Please check it

Several factors determine the difference in carbon stocks between the business-as-usual scenario and the increased biomass feedstock demand scenario. A major factor is the “speed” with which carbon stocks respond after harvest; this can be influenced by several factors: the speed with which a feedstock regrows and can be harvested again, the mix of feedstocks produced, and the rate at which soil carbon stocks change. Thus, the mix of feedstocks used can influence the shape of the curve and when it reaches equilibrium.

Previous studies have shown that estimates of the effects of biomass harvest on carbon stocks depend on the spatial scale of consideration (stand level or landscape level), the initial conditions of carbon stock on the land (e.g., managed forestland, old growth forestland, or agricultural land), the management practices used, and the time horizon over which effects are measured (Walker et al., 2010; Jonker et al., 2014; Mitchell et al., 2012; Galik and Abt, 2012; Ter-Mikaelian et al., 2015). Harvest of an existing

forest stand for use as a feedstock results in an immediate reduction of carbon on the site; the amount of carbon lost at the stand level is directly related to the intensity of the disturbance. At a stand level, harvest followed by regrowth (most US forests regenerate without intervention/planting) usually results in a cycle of loss followed by gain. The amount of carbon regained on the site can vary: in some cases, all is regained, in others only part is regained, and in others, more can be gained than is released.

Since stationary facilities require a continuous supply of feedstock, multiple stands will be disturbed asynchronously; the order in which losses and gains occur becomes meaningless at the landscape level because both simultaneously occur. Thus, the operative issue is the overall balance between losses and gains of carbon at the landscape scale. Thus, stand level accounting is not relevant to the calculation of BAFs for biomass feedstocks used at stationary sources. If harvest does not exceed the rate of carbon accumulation, the landscape-level carbon stocks are stable or increasing. However, there could be a net loss of carbon to the atmosphere at the landscape level, compared with the business-as-usual scenario, if trees are harvested at younger ages or if trees that would otherwise have been unharvested are harvested.

Biomass, particularly from forest sources, is also used for producing non-energy products. The demand for biomass feedstocks for energy generation can lead to a diversion of biomass from those products and lead to an immediate reduction in carbon stocks in products. It is also possible that anticipation of future demand for biomass feedstocks by stationary facilities could lead to land conversion, reforestation and retention, or accumulation of carbon stocks in a growing forest. In general terms, the amount of either net loss or net gain of carbon on the landscape is influenced by changes in many factors including those influencing net primary production and removals, and the net effect can be expected to vary over time.

When agricultural feedstocks that are harvested annually from land under continuous production, the time lag between harvest, CO₂ emissions from conversion to energy, and regrowth on land is likely to be close to one year, and the harvested carbon will be fully regained, with no net impact on above-ground carbon stocks. The production of these feedstocks may directly affect carbon stocks below-ground by increasing or decreasing soil carbon stocks relative to the use of the land in the business-as-usual scenario. The demand for biomass feedstocks can also affect carbon stocks by leading to a change in the use of land which could either release carbon stored in the land (for example if permanent grasslands are converted to annual agricultural production) or accumulate carbon on the land (for example through reforestation as annual cropland is converted back to forests).

Recommendation

- The estimate of direction and magnitude of the impact of using biogenic feedstocks in stationary facilities on terrestrial carbon stocks depends on the time horizon considered. There is no single-optimal time horizon for evaluating these impacts, and it may be primarily determined by the regulatory context ~~on mandating use of BAF.~~

Charge Question 1(a): Should the temporal scale for computing biogenic assessment factors vary by policy (e.g., near-term policies with a 10-15 year policy horizon vs. mid-term policies or goals with a 30-50 year policy horizon vs. long-term climate goals with a 100+ year time horizon), feedstocks (e.g., long rotation vs. annual/short-rotation feedstocks), landscape conditions, and/or other metrics? It is important to acknowledge that if temporal scales vary by policy, feedstock or landscape conditions, or

other factors, it may restrict the ability to compare estimates/results across different policies or different feedstock types, or to evaluate the effects across all feedstock groups simultaneously.

Charge Question 1(a)(i). If temporal scales for computing biogenic assessment factors vary by policy, how should emissions that are covered by multiple policies be treated (e.g., emissions may be covered both by a short-term policy, and a long-term national emissions goal)? What goals/criteria might support choices between shorter and longer temporal scales?

Charge Question 1(a)(ii). Similarly, if temporal scales vary by feedstock or landscape conditions, what goals/criteria might support choices between shorter and longer temporal scales for these metrics?

Charge Question 1(a)(iii). Would the criteria for considering different temporal scales and the related tradeoffs differ when generating policy neutral default biogenic assessment factors versus crafting policy specific biogenic assessment factors?

Charge Question 1(b). Should the consideration of the effects of a policy with a certain end date (policy horizon) only include emissions that occur within that specific temporal scale or should it consider emissions that occur due to changes that were made during the policy horizon but continue on past that end date (emissions horizon)?

The responses to questions 1(a), 1(a)(i), 1(a)(ii), 1(a)(iii), and 1(b) are combined because these questions all relate to goals or criteria that may affect choices of differing temporal scales for calculating BAFs.

Question 1a asks specifically if the temporal scale for computing ~~Biogenic Assessment Factors~~ BAFs should vary by regulatory policy. As noted in the overall response to Charge Question 1 (above), the SAB concludes that the BAF computation should be informed by the policy/regulatory objectives, particularly including with respect to time.

If there are ~~multiple different~~ objectives in ~~multiple policies/regulations~~ mandating use of BAFs (as discussed in charge question 1(a)(i)), there are no overriding scientific principles that can be applied *a priori* to guide alignment ~~among in the tools to be used for calculating BAFs for these multiple different~~ objectives.

One could advocate for a host of approaches to selecting a time horizon for evaluation; all would be plausible but not inherently aligned with the objective of the policy/regulations being promulgated. At the extremes one could consider only the carbon accounting over the year in which the biomass was combusted; such an approach would mean that almost all feedstocks would be assigned a BAF close to one, representing no net benefit to reducing atmospheric carbon dioxide concentrations. Conversely one could only consider net impacts on the carbon cycle over several hundred years, which would mean for most feedstocks the BAF would be close to zero (assuming steady demand and unchanged rotation lengths thus allowing stocks to come into equilibrium), indicating all biogenic emissions being net beneficial to the atmosphere. Neither of these approaches would align with the most likely objectives of ~~a biogenic accounting framework~~ BAFs; however, neither is inherently correct or incorrect.

The time horizon for consideration of carbon stock changes should be chosen based on the specific objective of a regulation, once it is identified (e.g., minimizing net greenhouse gas emissions over a specified period or temperature increase by a certain date); ~~which would be aligned with the policy/regulatory goals~~. The SAB makes no assertion regarding the appropriate policy/regulatory use of the BAF and thus supports no specific time horizon selected independent of a policy/regulatory objective/requirement.

Charge Question 1(c). Should calculation of the biogenic assessment factor include all future fluxes into one number applied at time of combustion (cumulative – or apply an emission factor only once), or should there be a default biogenic assessment schedule of emissions to be accounted for in the period in which they occur (marginal – apply emission factor each year reflecting current and past biomass usage)?

Accumulating all effects of the use of a biogenic feedstock over a time horizon is preferred to a marginal or instantaneous (“per period”) BAF. (For the purposes of answering this question, the SAB interprets “marginal” to mean “annual” or “per period” so as to distinguish it from the meaning of “marginal” that typically refers to the last unit of emissions or the additional effect of the last unit of biomass.)

As described in the overall response to Charge Question 1 (above), the SAB recommends a cumulative carbon accounting metric; however, there are alternative ways to calculate cumulative BAFs. EPA’s cumulative BAF (called BAF_T in the 2014 Framework) applied to stocks is one option, reflecting the carbon stocks at the end of the time horizon—specifically, changes in carbon stocks by time, T . One can also calculate a cumulative BAF that is based on the accumulation of annual differences in carbon *stocks on the land over the time horizon until equilibrium is reached*, here called $BAF_{\Sigma T}$. By accumulating annual differences across the projection period, this alternative cumulative BAF metric attempts to incorporate “residence time” in the sense that it is a proxy for the length of time carbon stays in the atmosphere until it is modified by changing stocks of carbon on the land. While intended to generate a single BAF term at the end of the selected time horizon, either computation can be evaluated at any time of interest. Until the implications of the differences are better understood, we support EPA’s cumulative BAF approach, i.e., the difference in carbon stocks *at the end of the selected time horizon*.

The choice of an appropriate cumulative BAF should be informed by a scientific assessment of the dynamics of additions to atmospheric carbon stocks as well as the complexities and uncertainties of these determinations, ensuring the accounting is accurate and verifiable. Both cumulative BAFs attempt to capture net changes in biogenic carbon stocks. A key feature of using carbon stocks is that all terms can be readily aggregated or disaggregated and are still subject to mass balance.

With either approach to evaluating BAFs, caution is advised with projections into the future. A BAF is inherently based on some type of modeling that employs assumptions about the relationship of variables in the future based on current observations. These assumptions may not be robust in the future. Each BAF will need to be assessed periodically to see if changing conditions warrant a revision (Buchholz et al. 2014).

Carbon accounting for biogenic emissions can ~~either be framed either~~ using differences in carbon emissions to the atmosphere or using differences in carbon stocks on the land. Conservation of mass dictates that any carbon taken from the land (through increased harvests or other disturbances) will

result, in the near-term, in equivalent increases of carbon in the atmosphere, followed by longer-run changes in ocean and land-based carbon. Thus, these approaches are compatible, but examining changes in stocks is operationally more direct and can be done periodically, rather than requiring continuous measurements to be accurate. However, both approaches should account for changes within the boundaries of the analysis, such as import and export of biogenic feedstocks and other associated products.

Long-Term Trends in Biogenic Assessment Factors

The Panel has suggested that cumulative BAFs might approach zero as T is reached. However, that is only true for $BAF_{\Delta t}$ and not the cumulative BAFs $\dots BAF_t$ and BAF_{yr} . Mathematically cumulative BAFs are hyperbolic functions once T is reached and have extremely long “tails”, representing a period of net CO₂ emissions to the atmosphere.

An approach to determining a baseline that includes an historical time period could be used to periodically reset a reference baseline based on re-measuring carbon stocks on the landscape using data from existing inventory programs. Carbon stock measurements have been made for more than a half century in the US, offering a robust record of change. This approach could improve the accuracy of the baseline over time; however, as noted above, the preference for use of a reference or future anticipated baseline depends on the objective. Future changes in growth-to-harvest ratios could be used to inform the model assumptions and modify the BAF that would be applicable going forward. This could create long-term incentives for sustainable management of land resources. In any accounting framework that assumes future regeneration and regrowth, it is important to periodically test this assumption against actual data as they become available. If assumptions of future regeneration and regrowth are not supported by observations, adjustments need to be made to models that are used to determine BAFs.

Recommendations

- The SAB recommends formulating BAFs based on changes in carbon stocks (terrestrial pools such as live, dead, soil, products, material lost in transport and waste), rather than an emissions-based (flux-based) approach, because the former comports with conventional carbon accounting, has well-defined boundaries, and follows the conservation of mass.
- The SAB suggests consideration of two cumulative BAFs—that proposed by EPA and an alternative metric that takes into account the changes in terrestrial carbon stocks over time. The appropriate cumulative metric for calculating BAFs will depend on the understanding of the carbon system and climate response for which there is uncertainty.

Charge Question 1(d). What considerations could be useful when evaluating the performance of a future anticipated baseline application on a retrospective basis (e.g., looking at the future anticipated baseline emissions estimates versus actual emissions ex post), particularly if evaluating potential implications for/revisions of the future anticipated baseline and alternative scenarios going forward?

It is appropriate to periodically revise the modeling and the BAFs. The goal of such revisions would be to update underlying economic and biophysical assumptions and modeling trends in light of new data to reduce uncertainty and to increase accuracy of future projections.

A retrospective comparison would compare model-projected behavior to newly available historical observations and estimates, such as regional feedstock demand, land-use changes (e.g., reforestation, management intensity, forest rotations characteristics and conversion of land to other land uses including dedicated energy crops), and forest carbon measurements and estimates (both level and composition). It would be important to re-examine parameters, functional forms, and other assumptions of the modeling approach as part of an *ex post* evaluation.

3.6. Scales of Biomass Use

Charge Question 2: What is/are the appropriate scale(s) of biogenic feedstock demand changes for evaluation of the extent to which the production, processing, and use of biogenic material at stationary sources results in a net atmospheric contribution of biogenic CO2 emissions using a future anticipated baseline approach? In the absence of a specific policy to model/emulate, are there general recommendations for what a representative scale of demand shock could be?

Charge Question 2(a). Should the shock reflect a small incremental increase in use of the feedstock to reflect the marginal impact, or a large increase to reflect the average effect of all users?

Charge Question 2(b). What should the general increment of the shock be? Should it be specified in tons, or as a percentage increase?

The responses to questions 2(a) and 2(b) are combined below because both questions relate to the size of the simulated change in demand for biomass feedstocks. The complexities are large and any predictions on scale of demand shock can only be done effectively in a policy/regulatory context as they are very challenging to define otherwise.

If the EPA's goal is to obtain a region-specific BAF for a feedstock, it will be necessary to project region-specific and feedstock-specific demand for biomass. Since the BAF for a feedstock could differ depending on the method of production (for example, the soil carbon implications of corn stover will depend on the type of tillage practice used and the amount of residue harvested), it will be appropriate to have the BAF for a feedstock in a region reflect the methods used to produce that feedstock. To the extent that BAFs depend on technology and emissions control regulations at a stationary facility in a region, they could also be defined in terms of specific technologies.

Charge Question 2(c). Should the shock be from a business as usual baseline, or from a baseline that includes increased usage of the feedstock (i.e., for a marginal shock, should it be the marginal impact of the first ton, or the marginal impact of something approximating the last ton)?

In the absence of a specific policy/regulation to model, the SAB cannot offer general recommendations for a representative scale of demand shock.

Charge Question 2(d). Should shocks for different feedstocks be implemented in isolation (separate model runs), in aggregate (e.g., across the board increase in biomass usage endogenously allocated by the model across feedstocks), or something in between (e.g., separately model agriculture-derived and forest-derived feedstocks, but endogenously allocate within each category)?

Charge Question 2(e). For feedstocks that are produced as part of a joint production function, how should the shocks be implemented? (e.g., a general increase in all jointly produced products; or, a

change in the relative prices of the jointly produced products leading to increased use of the feedstock, and decreased production of some other jointly produced products, but not necessarily an overall increase in production).

The responses to questions 2(d) and 2(e) are combined because both questions relate to modeling biomass feedstocks in isolation or jointly.

In the absence of a mandate for use of specific feedstocks or incentives for specific types of bioenergy which might be prescribed in a ~~policy/regulatory~~ framework, and which would inform the feedstock-specific demand that should be modeled, a reasonable approach is to model the aggregate demand for feedstocks. This approach assumes facilities are constantly seeking their least-cost alternative. An aggregate demand could be imposed on the model and used to determine demand for different feedstocks in different regions. This would allocate demand across feedstocks as well as within each category to simulate a given target aggregate demand determined by the market's ability to draw from the least cost combination of feedstocks.

Charge Question 2(f). How should scale of the policy be considered, particularly for default factors? (e.g., can a single set of default factors be applied to policies that lead to substantially different increases in feedstock usage)?

Default BAFs would likely vary by the scale of demand. In fact, a single set of default BAFs is unlikely to be robust across a wide range of scales of demand. The scale of demand is likely to influence the mix of feedstocks that is viable to produce because it can be expected to affect the market price of biomass. Low levels of demand for biomass may be met relatively easily by crop residues, forest residues and mill residues; high levels of demand could lead to dramatically increased harvests of forest biomass or production of dedicated energy crops. The BAF of a feedstock in a region can be expected to vary depending on whether there is a 1-million-ton increase in biomass demand or a 1-billion-ton increase in biomass demand.

In the absence of information about the scale of demand, BAFs could be determined for different threshold levels of aggregate demand for biomass feedstocks and consequent feedstock/region-specific demand.

Charge Question 2(g). Would the answers to any of the above questions differ when generating policy neutral default factors, versus generating factors directly tied to a specific policy?

While the methodological framework for different policies could be similar, we expect differences as follows: (1) BAFs that are tied to a particular ~~regulatory policy/approach~~, versus a particular period of time, would be based on simulating the aggregate and feedstock-specific demand that is expected to emanate from that ~~policy/regulation~~, while ~~policy/regulatory~~ neutral factors would be based on various exogenously specified quantities of demand for biomass and corresponding endogenously determined levels of feedstock specific demand, and (2) different ~~policies/regulations~~ may require different production and use practices, and thus result in different biogenic factors. Isolating the extent to which expected increase in demand for biomass and its consequences for CO₂ emissions can be attributed to a specific ~~policy/regulation~~ (when there are multiple ~~policies/regulations~~ inducing a shift to renewable energy) is likely to be complicated and challenging to convert into ~~policy/regulatory~~-specific BAFs. It

could also create unintentionally negative incentives for feedstock choice to comply with various
~~policy regulations~~.

Charge Question 2(h). What considerations could be useful when evaluating the performance of the demand shock choice ex post, particularly if evaluating potential implications for/revisions of the future anticipated baseline and alternative scenarios going forward?

It is likely that the observed feedstock demand in response to a specific ~~policy regulation~~ will differ from the forecast because the ~~policy regulation~~ can be expected to increase demand for feedstocks with lower BAF and decrease demand for feedstocks with a high BAF. Since feedstock-specific demand and the feedstock BAFs are likely to be jointly determined, while the approach proposed above determines them sequentially, divergence between model simulated demand for feedstocks and observations is inevitable.

An evaluation using actual data would also allow revisions to the EPA's estimates of feedstock demand changes (as discussed in response to Question 1d) based on updated data. To improve the performance of the model for assessing BAFs retrospectively, quantities of biomass feedstock (by feedstock category) harvested could be updated with actual observations. New data should improve the estimate of the portion of total biomass demand that is attributable to stationary facilities. This information could be used to improve BAFs.

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APPENDIX A: CHARGE TO THE SAB

February 25, 2015

MEMORANDUM

To: Holly Stallworth, Designated Federal Official
Science Advisory Board Staff Office

From: Paul Gunning, Director
Climate Change Division

Subject: Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources and
Charge Questions for SAB peer review

The purpose of this memorandum is to transmit the revised *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources*, related documentation and charge questions for consideration by the Science Advisory Board (SAB) during your upcoming peer review.

In January 2011, the U.S. Environmental Protection Agency (EPA) announced a series of steps it would take to address biogenic CO₂ emissions from stationary sources. EPA committed to conduct a detailed examination of the science and technical issues related to assessing biogenic CO₂ emissions from stationary sources and to develop a framework for evaluating those emissions. The draft study was released in September 2011 and subsequently peer reviewed by the SAB Ad-Hoc Panel on Biogenic Carbon Emissions (SAB Panel). The final peer review report was published September 2012.

To continue advancing the agency's technical understanding of the role that biomass use can play in reducing overall greenhouse gas emissions, the EPA released a second draft of the technical report, *Framework for Assessing Biogenic Carbon Dioxide for Stationary Sources*, in November 2014. This revised report presents a methodological framework for assessing the extent to which the production, processing, and use of biogenic material at stationary sources results in a net atmospheric contribution of biogenic CO₂ emissions. The revised report takes into account the SAB Panel's peer review recommendations on the draft 2011 Framework as well as the latest information and input from the scientific community and other stakeholders.

The revised framework addressed many of the SAB Panel's key concerns and recommendations by incorporating: an anticipated baseline approach analysis, including an alternative fate approach for waste-derived feedstocks and certain industrial processing products and byproducts; an evaluation of tradeoffs from using different temporal scales; an improved representation of the framework equation; and illustrative case studies demonstrating how the framework equation can be applied, using region-feedstock combinations to generate regional defaults per different baseline approaches and temporal scales.

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We ask the SAB to review and offer recommendations on specific technical elements of the revised framework for assessing the extent to which the production, processing, and use of biogenic material at stationary sources results in a net atmospheric contribution of biogenic CO₂ emissions, as identified in the charge accompanying this memo. We look forward to the SAB's review.

Please contact me if you have any questions about the attached study and charge.

Attachments:

- 1) *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources*
- 2) Technical Appendices
- 3) Response to the 2011 SAB Panel Peer Review Advisory

Peer Review Charge on the Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources

To improve the quality, utility, and scientific integrity of the Framework, EPA is providing this study, *Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources* (November 2014) and related materials to the Science Advisory Board (SAB). The revised report takes into account the SAB Biogenic Carbon Emissions Panel's ("SAB Panel") peer review recommendations² on the draft 2011 Framework³ as well as the latest information and input from the scientific community and other stakeholders. The "Response to SAB" document included in the materials provided for this review discusses and responds to the SAB Panel key points and recommendations, serving as a guide to how the revised framework incorporates their recommendations. This charge narrowly focuses on a few specific remaining questions that were not explicitly addressed in the initial SAB Panel peer review report.

The revised 2014 framework report identifies key scientific and technical factors associated with assessing biogenic CO₂ emissions from stationary sources using biogenic feedstocks, taking into account information about the carbon cycle. It also presents a methodological framework for assessing the extent to which the production, processing, and use of biogenic material at stationary sources for energy production results in a net atmospheric contribution of biogenic CO₂ emissions.

The revised framework and the technical appendices address many of the SAB Panel's key concerns and recommendations by incorporating: an anticipated baseline approach analysis (Appendices J-L); an alternative fate approach for waste-derived feedstocks (Appendix N); and certain industrial processing products and byproducts (Appendix D Addendum); an evaluation of tradeoffs from using different temporal scales (Appendix B); an improved representation of the framework equation (Appendix F); and illustrative case studies demonstrating how the framework equation can be applied, using region-

² The final peer review report from the SAB Panel on the draft 2011 framework was published on September 28, 2012 (Swackhamer and Khanna, 2011). Information about the SAB peer review process for the September 2011 draft framework is available at [[HYPERLINK "http://yosemite.epa.gov/sab/sabproduct.nsf/0/2F9B572C712AC52E8525783100704886"](http://yosemite.epa.gov/sab/sabproduct.nsf/0/2F9B572C712AC52E8525783100704886)].

³ The 2011 *Draft Accounting Framework for Biogenic CO₂ Emissions from Stationary Sources* is available at [[HYPERLINK "http://www.epa.gov/climatechange/ghgemissions/biogenic-emissions.html"](http://www.epa.gov/climatechange/ghgemissions/biogenic-emissions.html)].

feedstock combinations to generate regional defaults per different baseline approaches and temporal scales (Appendices H-N).

As explained in the revised framework introduction and accompanying SAB response document, the revised framework maintains the policy neutral approach from the 2011 draft Framework. It is a technical document that does not set regulatory policy nor does it provide a detailed discussion of specific policy and implementation options. Ultimately, the framework provides a methodological approach for considering, and a technical tool (the framework equation) for assessing, the extent to which there is a net atmospheric contribution of biogenic CO₂ emissions from the production, processing, and use of biogenic material at stationary sources. The revised framework details technical elements that should be considered as appropriate per specific policy applications or biogenic carbon-based feedstock assessments. Therefore, this charge excludes policy and regulatory recommendations or legal interpretation of the Clean Air Act's provisions related to stationary sources.

The revised report does not provide any final values or determinations: it offers indications of different biogenic feedstock production effects per research and analyses conducted, including illustrative example results per specific case study parameters. As discussed by the previous SAB Panel, this report also finds that biophysical and market differences between feedstocks may necessitate different technical approaches. Even using a future anticipated baseline approach, forest- and agriculture-derived feedstock characteristics, and thus analyses and results, may vary per region and per feedstock, and may be influenced by land use change effects. Illustrative analyses conducted for specific waste-derived feedstock case studies using a counterfactual anticipated baseline, as recommended by the SAB Panel, yielded minimal or negative net emissions effects.

This charge focuses on questions that remain regarding whether there are more definitive technical determinations appropriate for parameterizing key elements of the revised framework, regardless of application to a specific policy or program. Specifically, we ask that the SAB Panel examine and offer recommendations on future anticipated baseline specification issues in the context of assessing the extent to which the production, processing, and use of forest- and agriculture-derived biogenic material at stationary sources for energy production results in a net atmospheric contribution of biogenic CO₂ emissions – such as appropriate temporal scales and the scale of biogenic feedstock usage (model perturbations or ‘shocks’) for analyzing future potential bioenergy production changes.

Technical approaches, merits and challenges with applying a future anticipated baseline

Establishing a baseline creates a point of comparison necessary for evaluating changes to a system.⁴ Baseline specification can vary in terms of what entity or groups of entities are being analyzed (e.g., industries, economic sectors), temporal and spatial scales, geographic resolution, and, depending on context, environmental issues/attributes (EPA, 2010).⁵ The choice of baseline approach can also depend on the question being asked and the goal of the analysis at hand. For example, some GHG analysis may

⁴ Definitions for baseline vary, including “the reference for measurable quantities from which an alternative outcome can be measured” (IPCC AR4 WGIII, 2007) or “the baseline (or reference) is the state against which change is measured. It might be a ‘current baseline,’ in which case it represents observable, present-day conditions. It might also be a ‘future baseline,’ which is a projected future set of conditions excluding the driving factor of interest. Alternative interpretations of the reference conditions can give rise to multiple baselines” (IPCC AR4 WGII, 2007).

⁵ Guidelines for Preparing Economics Analyses (NCEE), Chapter 5: [[HYPERLINK](http://yosemite.epa.gov/ee/epa/ee/nf/vwAN/EE-0568-05.pdf/$file/EE-0568-05.pdf) "http://yosemite.epa.gov/ee/epa/ee/nf/vwAN/EE-0568-05.pdf/\$file/EE-0568-05.pdf"]

1 require a baseline against which historic changes of landscape carbon stocks can be measured. Other
2 applications may necessitate a baseline against which the estimated GHG emissions and sequestration
3 associated with potential future changes in related commodity markets and policy arenas. Analyses of
4 the estimated GHG emissions and sequestration effects from changes in biomass use have used different
5 baseline approaches, as well as a wide range of different temporal scales and alternative scenario
6 parameters (Sohnen and Sedjo, 2000; Fargione, 2008; UNFCCC, 2009; Walker et al., 2010; Cherubini
7 et al, 2011; Galik and Abt, 2012; Latta et al., 2013; Walker et al., 2013; AEO, 2014; U.S. EPA, 2014;
8 Miner et al., 2014).

9 The draft 2011 framework had discussed three different potential baseline approaches – reference point,
10 future anticipated and comparative – and used the reference point baseline in its hypothetical case study
11 applications of the Framework. The SAB Panel in its review stated that “the choice of a fixed reference
12 point may be the simplest to execute, but it does not actually address the question of the extent to which
13 forest stocks would have been growing/declining over time in the absence of a particular bioenergy
14 facility” (SAB Advisory, p. 29). The SAB Panel expressed concern that the reference point baseline
15 does not address the important question of additionality, or what would have been the trajectory of
16 biogenic CO₂ stocks and fluxes in the absence of an activity or activities using biogenic feedstocks for
17 energy, especially in the context of forest-derived feedstocks.⁶ “Estimating additionality, i.e., the extent
18 to which forest stocks would have been growing or declining over time in the absence of harvest for
19 bioenergy, is essential, as it is the crux of the question at hand. To do so requires an anticipated baseline
20 approach” (SAB Letter, p. 2).

21 Through public comments to the SAB Panel during the 2011-2012 SAB peer review process, various
22 stakeholders expressed divergent perspectives on the appropriate baseline for the draft 2011 framework
23 report.⁷ The revised 2014 framework retains the reference point baseline and adds the anticipated
24 baseline in order to retain adaptability for potential applications, and discusses both approaches at length
25 in the revised report and several technical appendices. However, as the SAB Panel was clear in its
26 previous review of the reference point baseline, EPA has no outstanding technical questions for the SAB
27 Panel on that baseline approach. This charge focuses specifically on remaining technical questions that
28 EPA has on the future anticipated baseline approach.

29 **Part 1 – Future anticipated baseline approach and temporal scale**

30 It is important to consider possible treatments of time and the implications of these treatments in
31 developing strategies for long-term and short-term emissions assessment, because the choice of

⁶ The difference in net atmospheric CO₂ emissions contributions with and without changes in biogenic feedstock use is known as additionality (Murray et al., 2007). Additionality can be determined by assessing the difference in potential net atmospheric CO₂ emissions of a specific level of biogenic feedstock use over a certain period of time (in many cases the business-as-usual [BAU] baseline) versus the net atmospheric CO₂ emissions contributions that would have occurred over the same time period with a different level of biogenic feedstock use (counterfactual scenario), holding other factors and assumptions consistent between scenarios.

⁷ The American Forest and Paper Association (AF&PA) supported the reference point baseline (e.g., comments submitted October 2011, March 2012) applied historically (January 2012, March 2012). The National Alliance of Forest Owners (NAFO) stated if certain feedstocks weren't categorically excluded, then the historical reference point baseline should be used (e.g., March 2012, August 2012). The U.S. Department of Agriculture stated preference for a historic baseline approach (May 2012). The Environmental Defense Fund (EDF) (January 2012, May 2012) and NCASI (October 2011, March 2012) both supported the retrospective reference point approach, though also both offered recommendations if an anticipated baseline approach was included (EDF for future anticipated and NCASI for counterfactual). Others, such as Green Power Institute (March 2012), the National Resource Defense Council (NRDC, August 2012), Becker et al. (August 2012), Biomass Energy Resource Center et al. (February 2012), and a group scientists letter to EPA (June 2014) all support some form of the anticipated baseline approach (future anticipated and/or counterfactual).

1 treatment may have significant impacts on the result of an assessment framework application. For the
2 intended use of the revised Framework – assessing the extent to which the production, processing, and
3 use of biogenic material at stationary sources results in a net atmospheric contribution of biogenic CO₂
4 emissions – there are different elements of time to consider when using a future anticipated baseline
5 approach. These elements can include:

- 6 • Emissions horizons, assessment or policy horizons, and reporting periods (i.e., fluxes related to
7 feedstock production may occur over many years to decades, whereas reporting may be the
8 current year and policies may cover only a few years or decades), and
 - 9 • Differences in temporal characteristics of different feedstocks (i.e., annual crops, short rotation
10 energy crops, and longer rotation forestry systems).
 - 11 • Changes in biophysical and economic conditions over time may affect or differ from those in
12 future anticipated baseline and scenario estimates.
- 13

14 The SAB Panel in its previous peer review noted that “this is a complicated subject because there are
15 many different time scales that are important for the issues associated with biogenic carbon emissions”
16 (Advisory, page 13). They discussed multiple temporal scales associated with mixing of carbon
17 throughout the different reservoirs on the Earth’s surface at the global scale (Advisory, page 13) and
18 climate responses to CO₂ and other greenhouse gases (Advisory, page 15), implications of temporal
19 scales greater and shorter than 100 years, and those related to the growth cycles of different feedstock
20 types (Advisory, page 15). The SAB Panel specifically highlighted considerations for using a 100-year
21 or longer temporal scale for evaluating climate impacts and radiative forcing⁸ as well as decay rates and
22 carbon storage in forest ecosystems in the main text as well as in Appendices B-D. However, in its
23 recommendations, including those for developing default BAFs per region, the SAB Panel did not offer
24 recommendations per what temporal scale to use in the specific context of the Framework for its
25 intended use and scope. Instead, the SAB Panel stated that “there is no scientifically correct answer
26 when choosing a time horizon, although the *Framework* should be clear about what time horizon it uses,
27 and what that choice means in terms of valuing long term versus shorter term climate impacts
28 (Advisory, page 15) and recommended that a revised framework “incorporate various time scales and
29 consider the tradeoffs in choosing between different time scales” (Advisory, page 43).

30 Multiple stakeholders have also weighed in on temporal scales, some with specific recommendations on
31 what temporal scale should/could be used for framework assessments, others with no specific
32 recommendations but emphasizing the importance of time. In various comments submitted during the
33 2011-2012 SAB process, NAFO supported a 100-year timeframe (March 2012). The National Council
34 for Air and Stream Improvement (NCASI) in October 2011 comments suggested “the need for
35 considerable flexibility in setting the temporal scales for determining the stability of forest carbon

⁸ EPA acknowledges that the long-term climate impacts of shifting from fossil fuel to biogenic energy sources is an important topic for climate change mitigation policy and also recognizes the extensive work being conducted by EPA and throughout the research community on this question. However, EPA’s focus here is on a narrower, more targeted goal of developing tools to assess the extent to which there is a net atmospheric contribution of biogenic CO₂ emissions from the production, processing, and use of biogenic feedstocks at stationary sources. This more narrowly defined assessment is anticipated to be a better fit for the types of program and policy applications in which this framework may potentially be applied.

stocks. There are a range of circumstances that can cause transient trends in carbon stocks that can obscure the more relevant long-term picture.”

Other groups, such as The Wilderness Society (TWS), NRDC, EDF and others, submitted comments supporting consideration of shorter temporal scales. In its comments and example calculations, TWS (in October 2011 comments) implied support for shorter temporal scales, and stated in later comments that the SAB “text appears biased toward ignoring effects that occur within a 100-year period” (May 2012). NRDC (August 2014) implied support for shorter temporal scales: “even if near-term carbon emissions increases are eventually ‘made up’ by regrowth over the very long term, the carbon emission from these types of biomass actually exceed those from fossil fuels for decades. This puts use of these types of biomass fuels in conflict with the urgent need for near-term carbon emissions reductions. The time profile of the carbon emission from biogenic fuel sources matters because it is critical to limit near-term global GHG emissions.” This perspective was similar to that shared by Becker et al. in their August 2012 comments. EDF (January 2012) suggested a very short temporal scale (in the context of supporting a retrospective reference baseline). Others, such as the Biotechnology Industry Organization (October 2011) simply asked for “clarification on the methodology used to identify the time scale of carbon cycles.”

Per the various recommendations above, the revised framework report and the technical appendices include a more detailed discussion of intertemporal tradeoffs inherent in various options for treating emissions over time in the context of assessing biogenic CO₂ emissions from stationary sources. Specifically, the revised report has: a section on key temporal scale considerations (pages 33-38); an appendix dedicated to temporal scale issues (Appendix B), which includes further discussion of temporal scales in the context of future anticipated baselines and decay rates for feedstocks that would have otherwise decayed if not used for energy, and; an appendix describing the background of and modeling considerations for constructing an anticipated baseline approach (Appendix J). Also, illustrative calculations using the future anticipated baseline estimates use future simulations and thereby explicitly incorporate temporal patterns of different feedstocks (e.g., feedstock growth rates, decay rates) into the analysis and shows how results can vary per temporal scale used (as seen in Appendices K and L). The revised framework does not recommend specific temporal scales for framework applications, but rather identifies different elements of and considerations concerning time to provide insights into the potential implications of using different temporal scales.

EPA seeks guidance on the following issues regarding appropriate temporal scales for assessing biogenic CO₂ emissions using a future anticipated baseline, using the above referenced components of the revised framework report as the starting point for the SAB Panel’s discussion. As the previous SAB Panel recommended developing default assessment factors by feedstock category and region that may need to be developed outside of a specific policy context, and as the framework could be also be used in specific policy contexts, the questions below relate to the choice of temporal scale both within and outside of a specific policy context.

Part 1 – Future anticipated baseline approach and temporal scale

1. What criteria could be used when considering different temporal scales and the tradeoffs in choosing between them in the context of assessing the net atmospheric contribution of

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- biogenic CO₂ emissions from the production, processing, and use of biogenic material at stationary sources using a future anticipated baseline?
- a. Should the temporal scale for computing BAFs vary by policy (e.g., near-term policies with a 10-15 year policy horizon vs. mid-term policies or goals with a 30-50 year policy horizon vs. long-term climate goals with a 100+ year time horizon), feedstocks (e.g., long rotation vs. annual/short-rotation feedstocks), landscape conditions, and/or other metrics? It is important to acknowledge that if temporal scales vary by policy, feedstock or landscape conditions, or other factors, it may restrict the ability to compare estimates/results across different policies or different feedstock types, or to evaluate the effects across all feedstock groups simultaneously.
 - i. If temporal scales for computing BAFs vary by policy, how should emissions that are covered by multiple policies be treated (e.g., emissions may be covered both by a short-term policy, and a long-term national emissions goal)? What goals/criteria might support choices between shorter and longer temporal scales?
 - ii. Similarly, if temporal scales vary by feedstock or landscape conditions, what goals/criteria might support choices between shorter and longer temporal scales for these metrics?
 - iii. Would the criteria for considering different temporal scales and the related tradeoffs differ when generating policy neutral default BAFs versus crafting policy specific BAFs?
 - b. Should the consideration of the effects of a policy with a certain end date (policy horizon) only include emissions that occur within that specific temporal scale or should it consider emissions that occur due to changes that were made during the policy horizon but continue on past that end date (emissions horizon)?
 - c. Should calculation of the BAF include all future fluxes into one number applied at time of combustion (cumulative – or apply an emission factor only once), or should there be a default biogenic assessment schedule of emissions to be accounted for in the period in which they occur (marginal – apply emission factor each year reflecting current and past biomass usage)?
 - d. What considerations could be useful when evaluating the performance of a future anticipated baseline application on a retrospective basis (e.g., looking at the future anticipated baseline emissions estimates versus actual emissions *ex post*), particularly if evaluating potential implications for/revisions of the future anticipated baseline and alternative scenarios going forward?

Part 2 – Scales of biomass use when applying future anticipated baseline approach

EPA seeks guidance on technical considerations concerning how to select model perturbations ('shocks') for future anticipated baseline simulations estimating the net atmospheric contribution of biogenic CO₂ emissions from the production, processing, and use of biogenic material at stationary sources, using the above referenced components of the revised framework report as the starting point for the SAB Panel's discussion. As the SAB Panel recommended developing default assessment factors by feedstock category and region that may need to be developed outside of a specific policy context, and as the framework

could be also be used in specific policy contexts, the questions below relate to the choice of model shocks both within and outside of a specific policy context.

2. What is/are the appropriate scale(s) of biogenic feedstock demand changes for evaluation of the extent to which the production, processing, and use of biogenic material at stationary sources results in a net atmospheric contribution of biogenic CO₂ emissions using a future anticipated baseline approach? In the absence of a specific policy to model/emulate, are there general recommendations for what a representative scale of demand shock could be?
 - a. Should the shock reflect a small incremental increase in use of the feedstock to reflect the marginal impact, or a large increase to reflect the average effect of all users?
 - b. What should the general increment of the shock be? Should it be specified in tons, or as a percentage increase?
 - c. Should the shock be from a business as usual baseline, or from a baseline that includes increased usage of the feedstock (i.e., for a marginal shock, should it be the marginal impact of the first ton, or the marginal impact of something approximating the last ton)?
 - d. Should shocks for different feedstocks be implemented in isolation (separate model runs), in aggregate (e.g., across the board increase in biomass usage endogenously allocated by the model across feedstocks), or something in between (e.g., separately model agriculture-derived and forest-derived feedstocks, but endogenously allocate within each category)?
 - e. For feedstocks that are produced as part of a joint production function, how should the shocks be implemented? (e.g., a general increase in all jointly produced products; or, a change in the relative prices of the jointly produced products leading to increased use of the feedstock, and decreased production of some other jointly produced products, but not necessarily an overall increase in production).
 - f. How should scale of the policy be considered, particularly for default factors? (e.g., can a single set of default factors be applied to policies that lead to substantially different increases in feedstock usage)?
 - g. Would the answers to any of the above questions differ when generating policy neutral default factors, versus generating factors directly tied to a specific policy?
 - h. What considerations could be useful when evaluating the performance of the demand shock choice *ex post*, particularly if evaluating potential implications for/revisions of the future anticipated baseline and alternative scenarios going forward

APPENDIX B: MEMBERS OF THE BIOGENIC CARBON EMISSIONS PANEL

CHAIR

Dr. Madhu Khanna, ACES Distinguished Professor in Environmental Economics, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, Urbana, IL

PANEL MEMBERS

Dr. Robert Abt, Professor of Forestry, Department of Forestry and Environmental Resources, College of Natural Resources, North Carolina State University, Raleigh, NC

Dr. Morton Barlaz, Professor, Civil, Construction, and Environmental Engineering, Engineering, North Carolina State University, Raleigh, NC

Dr. Marilyn Buford, National Program Leader, Silviculture Research, Research & Development, USDA Forest Service, Washington, DC

Dr. Mark Harmon, Professor and Richardson Chair, College of Forestry, Oregon State University, Corvallis, OR

Dr. Jason Hill, Associate Professor, Bioproducts and Biosystems Engineering, College of Food, Agricultural and Natural Resource Sciences, University of Minnesota, St. Paul, MN

Dr. John Reilly, Senior Lecturer and Co-Director, Joint Program on the Science and Policy of Global Change, Center for Environmental Policy Research, E19-439L, Massachusetts Institute of Technology, Cambridge, MA

Dr. Charles Rice, Distinguished Professor, Department of Agronomy, Soil Microbiology, Kansas State University, Manhattan, KS

Dr. Steven Rose, Senior Research Economist, Energy and Environmental Analysis Research Group, Electric Power Research Institute, Palo Alto, CA

Dr. Daniel Schrag, Professor of Earth and Planetary Sciences, Harvard University, Cambridge, MA

Dr. Roger Sedjo, Senior Fellow and Director of the Center for Forest Economics and Policy Program, Resources for the Future, Washington, DC

Dr. Ken Skog, Supervisory Research Forester (retired), Economics and Statistics Research, Forest Products Laboratory, USDA Forest Service, Madison, WI

Dr. Tristram West, Ecosystem Scientist, Joint Global Change Research Institute, University of Maryland, College Park, MD

Dr. Peter Woodbury, Senior Research Associate, Department of Crop and Soil Sciences, College of Agriculture and Life Sciences, Cornell University, Ithaca, NY, U.S.A.

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Science Advisory Board (SAB) 8-29-18 Draft Report for Quality Review - Do Not Cite or Quote.
This draft has not been reviewed or approved by the chartered SAB, and does not represent EPA policy.

SCIENCE ADVISORY BOARD STAFF

Dr. Holly Stallworth, Designated Federal Officer, U.S. Environmental Protection Agency, Washington,
DC

B-[PAGE * MERGEFORMAT]

Message

From: Larry Monroe [drlarrymonroe@gmail.com]
Sent: 12/19/2018 4:11:55 PM
To: Smith, Anne [Anne.Smith@NERA.com]; Larry Monroe [lsmonroe9@gmail.com]; Michael Honeycutt [Michael.honeycutt@tceq.texas.gov]; Steven Hamburg [shamburg@edf.org]; Carpenter, Thomas [Carpenter.Thomas@epa.gov]
CC: Brennan, Thomas [Brennan.Thomas@epa.gov]; Johnston, Khanna [Johnston.Khanna@epa.gov]; Matthew Welch [mwelch@edf.org]
Subject: RE: Biogenic Carbon Emissions Report - Review and comments
Attachments: Biogenic Carbon-8-29-18 12-16-18 edits Monroe edits_Smith edits_Monroe again plus cumulative edits[60944].docx

I have looked at the cumulative descriptions here, and – in the spirit of not adding too much to the draft approved with changes – I replaced the text in the Exec Summary with a short description taken from the body. I also added some subscripts to the various descriptions of BAF to be consistent.

Larry

Sent from Mail for Windows 10

From: Larry Monroe
Sent: Wednesday, December 19, 2018 10:07 AM
To: Smith, Anne; Larry Monroe; Michael Honeycutt; Steven Hamburg; Carpenter, Thomas
Cc: Brennan, Thomas; Johnston, Khanna; Matthew Welch
Subject: RE: Biogenic Carbon Emissions Report - Review and comments

I have read through the version Anne sent, and I made some minor edits – a couple of punctuation marks and a few more regulation/regulatory for “policy” and “policies.”

I am still working on the cumulative section and will send some thoughts in a little while.

This version adequately addresses all of my concerns in the quality review that I submitted, with the cumulative section clarification that I plan to send out soon.

Larry

Sent from Mail for Windows 10

From: Smith, Anne
Sent: Tuesday, December 18, 2018 4:42 PM
To: Larry Monroe; Michael Honeycutt; Steven Hamburg; Larry Monroe; Carpenter, Thomas
Cc: Brennan, Thomas; Johnston, Khanna; Matthew Welch
Subject: RE: Biogenic Carbon Emissions Report - Review and comments

All,

I’m attaching my own edits, which I have done as redline ON TOP OF LARRY’s version from earlier today. Thus, you will see Larry’s redlining in here as well as my own. I have added margin notes in a few places to explain the reason for making certain edits. I only did this where it seemed that some explanation would be appreciated by you all. Although I have managed to get all the way through the document today, and I believe that most of my original comments are now addressed (if my and Larry’s edits in the attached are accepted) I remain concerned that the part

where specific charge questions are being answered is not actually answering the questions. I didn't edit with that issue in mind. I'll try to take time to see if those issues might have been addressed during Steve and Jeanne's revisions. Overall, I think the points about the need for more regulatory specificity are being stated in a way that outside readers will be more likely to understand, and I do appreciate Larry's realization that the right word is regulatory not policy...that alone helped a lot in my ability to make sense of what the review was trying to say.

--Anne

From: Larry Monroe <lsmunroe9@gmail.com>

Sent: Tuesday, December 18, 2018 11:42 AM

To: Michael Honeycutt <Michael.Honeycutt@tceq.texas.gov>; Steven Hamburg <shamburg@edf.org>; Larry Monroe <drlarrymonroe@gmail.com>; Carpenter, Thomas <Carpenter.Thomas@epa.gov>

Cc: Smith, Anne <Anne.Smith@NERA.com>; Brennan, Thomas <Brennan.Thomas@epa.gov>; Johnston, Khanna <Johnston.Khanna@epa.gov>; Matthew Welch <mwelch@edf.org>

Subject: RE: Biogenic Carbon Emissions Report - Review and comments

Sorry that this is later than I intended.

I accepted all the changes in the version that Steve sent, just to show the three explanations that I propose to be inserted to help the readability. I will rely on Blaise Pascal's quote for my inability to craft a single sentence that could be replicated in three places in the document – they are all longer than that.

I have made this longer than usual because I have not had time to make it shorter.

Blaise Pascal, 1657

I also attempted to make the document more specific by liberal substitute of “regulatory” for “policy”. In my mind, regulatory more narrowly describes what the document is trying to say. That is, BAFs may be vastly different for two regulatory schemes, while they both may fall under the same policy of reducing emissions of greenhouse gases.

Definition 2b in Merriam-Webster of policy states:

a high-level overall plan embracing the general goals and acceptable procedures especially of a governmental body

<https://www.merriam-webster.com/dictionary/policy>

where, regulation is defined (also as 2b) as

a rule or order issued by an executive authority or regulatory agency of a government and having the force of law

<https://www.merriam-webster.com/dictionary/regulation>

Forgive my presumption, but I believe that this makes the document much clearer and specific. Let me know your comments.

Anne Smith has only briefly seen these, so I invite her edits also. I will continue to work on the main document also.

Let me know if there are questions or comments.

Thanks,
Larry

Message

From: Rakosnik, Delaney [rakosnik.delaney@epa.gov]
Sent: 11/30/2018 3:36:24 PM
To: Boxerman, Samuel B. [sboxerman@sidley.com]
CC: Atkinson, Emily [Atkinson.Emily@epa.gov]; Lewis, Josh [Lewis.Josh@epa.gov]
Subject: CONFIRMED RE: Meeting request

Dear Sam,

You are confirmed for a 45 min meeting with Bill Wehrum on 12/10, starting at 4pm.
Directions and procedures to 1200 Pennsylvania Avenue NW:

Metro: If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

Taxi: Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12th Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

Security Procedures: A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. If you are a foreign national entering on a non-US passport, please let us know in advance, as there is a separate clearance process.

Upon arrival, let the guards know that you were instructed to call 202-564-7404 for a security escort. Please send me a list of participants in advance of the meeting and feel free to contact me should you need any additional information.

Many thanks,

Delaney Rakosnik
Staff Assistant
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406A, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-2229
Email: rakosnik.delaney@epa.gov

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Thursday, November 29, 2018 6:12 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Meeting request

Yes, let's confirm 12/10 at 4pm. For one hour?

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

From: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Sent: Thursday, November 29, 2018 1:30 PM
To: Boxerman, Samuel B. <sboxerman@sidley.com>
Subject: RE: Meeting request

Thank you for your available dates. Very helpful.

How about 12/10 at 4pm?

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Wednesday, November 28, 2018 4:39 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Meeting request
Importance: High

Thank you for getting back to me.

It turns out that we now have a conflict among our team at that time. I hope I have this right, but I believe these are our available times on those dates:

- 12/10 – after 3:30pm
- 12/11 – btw 12:30pm and 2:30pm [least preferred date]
- 12/14 – after 1:00pm
- 12/17 – after 3:30pm
- 12/18 – after 1:30pm
- 12/19 – after 1:00pm
- 12/20 – any time

Please let me know if any of those dates/times would work for Bill.

Many thanks for your assistance,

- Sam

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

From: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Sent: Wednesday, November 28, 2018 12:45 PM

To: Boxerman, Samuel B. <sboxerman@sidley.com>

Subject: RE: Meeting request

Dear Sam,

Bill Wehrum is happy to meet with you. How does December 18th at 11am work for your calendars?

Many thanks,

Delaney Rakosnik

Staff Assistant

Immediate Office of the Assistant Administrator

Office of Air and Radiation, USEPA

Room 5406A, 1200 Pennsylvania Avenue NW

Washington, DC 20460

Voice: 202-564-0935

Email: rakosnik.delaney@epa.gov

From: Boxerman, Samuel B. <sboxerman@sidley.com>

Sent: Wednesday, November 28, 2018 9:57 AM

To: Atkinson, Emily <Atkinson.Emily@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>

Subject: RE: Meeting request

Importance: High

Good morning – Just circling back to see if there are options available to meet with Bill Wehrum on the proposed dates.

Many thanks for your assistance,

-- Sam

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP

+1 202 736 8547

sboxerman@sidley.com

From: Atkinson, Emily <Atkinson.Emily@epa.gov>

Sent: Wednesday, November 21, 2018 7:53 AM

To: Boxerman, Samuel B. <sboxerman@sidley.com>

Subject: RE: Meeting request

Hi Sam,

We will review this request and Bill Wehrum's scheduler – Delaney Rakosnik – will be in touch next week to let you know about scheduling options.

Emily

Emily Atkinson
Special Assistant
Management Analyst

Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406E, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Tuesday, November 20, 2018 4:00 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: Meeting request

Emily –

Good afternoon. On behalf of the National Alliance of Forest Owners (NAFO), we would request a meeting with Bill Wehrum. The purpose of the meeting would be to discuss biogenic CO2 emissions under the Clean Air Act. The proposed attendees:

Dave Tenny, NAFO

Chip Murray, NAFO

Sam Boxerman, Sidley Austin LLP (outside counsel for NAFO)

Russ Frye, FryeLaw PLLC (outside counsel to Packaging Corporation of America)

There may be other proposed attendees, but we would of course advise you in advance of our meeting in order to avoid any potential conflicts with any former clients of Mr. Wehrum or his law firm before he joined EPA.

We have availability at various times during the week of December 17 (except Friday, 12/21) – and would also have availability on 12/10-11. Please let me know available times for a meeting on those dates. We would request a 1 hour time slot.

If you have any questions, please contact me at your earliest convenience. Many thanks for your assistance,

-- Sam

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

This e-mail is sent by a law firm and may contain information that is privileged or confidential.
If you are not the intended recipient, please delete the e-mail and any attachments and notify us immediately.

Message

From: Atkinson, Emily [Atkinson.Emily@epa.gov]
Sent: 1/30/2018 3:18:33 PM
To: Alonso, Richard [ralonso@sidley.com]
CC: Lewis, Josh [Lewis.Josh@epa.gov]; Chip Murray [cmurray@nafoalliance.org]
Subject: Confirmed 2/12 at 3pm: Meeting Request with Bill Wehrum

Hi Richard,

You are confirmed for a 45 minute meeting on Monday, February 12 at 3:00pm with Bill Wehrum.
Directions and procedures to 1200 Pennsylvania Avenue NW:

Metro: If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

Taxi: Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12th Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

Security Procedures: A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. Let the guards know that you were instructed to call 202-564-7404 for a security escort.

Please send me a list of participants in advance of the meeting and feel free to contact me should you need any additional information.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Alonso, Richard [mailto:ralonso@sidley.com]
Sent: Tuesday, January 30, 2018 10:09 AM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Cc: Lewis, Josh <Lewis.Josh@epa.gov>; Chip Murray <cmurray@nafoalliance.org>
Subject: RE: Meeting Request with Bill Wehrum

This works great. Thank you. Please book February 12th at 3:00.

RICHARD ALONSO

SIDLEY AUSTIN LLP
+1 202 736 8772
ralonso@sidley.com

From: Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]
Sent: Tuesday, January 30, 2018 8:25 AM
To: Alonso, Richard <ralonso@sidley.com>
Cc: Lewis, Josh <Lewis.Josh@epa.gov>; Chip Murray <cmurray@nafoalliance.org>
Subject: RE: Meeting Request with Bill Wehrum

Hi Richard,

Yes, we could fit this in for 45 minutes on Monday, February 12 at 3:00pm.

Please advise if this could work for you all.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Alonso, Richard [<mailto:ralonso@sidley.com>]
Sent: Monday, January 29, 2018 5:47 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Cc: Lewis, Josh <Lewis.Josh@epa.gov>; Chip Murray <cmurray@nafoalliance.org>
Subject: RE: Meeting Request with Bill Wehrum

Thank you Emily. February 7th is a problem for one of our key attendees. Does Bill have time early the following week (February 12th or 13th). If not, we will take your proposed time on February 7th.

Thank you.

Sent with BlackBerry Work
(www.blackberry.com)

From: Atkinson, Emily <Atkinson.Emily@epa.gov>
Date: Monday, Jan 29, 2018, 2:15 PM
To: Alonso, Richard <ralonso@sidley.com>
Cc: Lewis, Josh <Lewis.Josh@epa.gov>, Chip Murray <cmurray@nafoalliance.org>
Subject: RE: Meeting Request with Bill Wehrum

Hi Richard,

It looks like Bill Wehrum could be available for a 45 minute meeting on Wednesday, February 7 at 11:00am.

Let me know if this could work on your end.

Emily

Emily Atkinson
Management Analyst/Office Manager
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5412B, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Alonso, Richard [<mailto:ralonso@sidley.com>]
Sent: Friday, January 26, 2018 5:02 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Cc: Lewis, Josh <Lewis.Josh@epa.gov>; Chip Murray <cmurray@nafoalliance.org>
Subject: Meeting Request with Bill Wehrum

Emily,

I hope you are well. I represent the National Alliance of Forest Owners (NAFO). NAFO is committed to advancing federal policies that support the long-term economic, social and environmental benefits of sustainably managed privately-owned forests. We would like to request a meeting with Bill Wehrum to discuss national climate change policies and how such policies impact NAFO members. The information for this meeting request is as follows:

Subject Matter: Discussion of biogenic CO2 regulation under the CAA

Attendees:

- Chip Murray, NAFO
- Dave Tenny, NAFO
- Annabeth Reitter, Domtar (NAFO member)
- Neil Naraine, International Paper (NAFO member)
- Rich Alonso, Sidley Austin LLP (outside counsel for NAFO)
- Glen Coffee, Coffee Group (tentative)
- Tyler Norvell, Coffee Group (tentative)

Suggested Dates: February 1, 2, 5, or 6.

It is my understanding that none of the participants were clients of Mr. Wehrum or his firm before he joined EPA. Please let us know if any of these dates are acceptable. Thank for your assistance. Please call me with any questions.

RICHARD ALONSO

SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, DC 20005
+1 202 736 8772

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immediately.

Message

From: Atkinson, Emily [Atkinson.Emily@epa.gov]
Sent: 4/12/2019 7:57:25 PM
To: David Beaudreau [dbeaudreau@dclrs.com]
Subject: Confirmed 4/24/19 at 10am: Meeting request on behalf of Composite Panel Association

Thank you David.

You are confirmed for a 45 minute meeting with Anne Idsal on Wednesday, April 24, 2019 at 10:00am.

Directions and procedures to 1200 Pennsylvania Avenue NW:

Metro: If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

Taxi: Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12th Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

Security Procedures: A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. If you are a foreign national entering on a non-US passport, please let us know in advance, as there is a separate clearance process.

Upon arrival, let the guards know that you were instructed to call 202-564-7404 for a security escort. Unfortunately, I cannot send you a calendar invite, but feel free to contact me should you need any additional information.

Emily

Emily Atkinson
Special Assistant
Management Analyst
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406E, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: David Beaudreau <dbeaudreau@dclrs.com>
Sent: Friday, April 12, 2019 3:50 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: Re: Meeting request on behalf of Composite Panel Association

Hi Emily,

Perfect! We'll see you then. If you could let me know which office we should report to/send me a calendar invite that would be great. The attendees will be Jackson Morrill and myself.

Have a nice weekend,
David

On Fri, Apr 12, 2019 at 3:31 PM Atkinson, Emily <Atkinson.Emily@epa.gov> wrote:

Hi David,

I apologize for the delay in getting back to you.

Anne Idsal could be available for a 45 minute meeting on Wednesday, April 24 at 10:00am.

Let me know if this could work with your schedule.

Thanks.

Emily

Emily Atkinson

Special Assistant
Management Analyst

Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406E, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: David Beaudreau <dbeaudreau@dclrs.com>
Sent: Friday, April 12, 2019 8:25 AM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: Re: Meeting request on behalf of Composite Panel Association

Hi Emily,

Happy Friday-I wanted to circle back to see if next Friday there might be time between 9 am and 2 pm? If not, anytime before 3 pm on April 24? We will have a document ready soon related to the meeting.

Thanks!

David

On Wed, Apr 10, 2019 at 3:46 PM David Beaudreau <dbeaudreau@dclrs.com> wrote:

Thanks Anne!

Emily, as you're looking at the calendar, Friday the 19th or Tuesday the 24th would be best.

David

On Wed, Apr 10, 2019 at 3:29 PM Idsal, Anne <idsal.anne@epa.gov> wrote:

Good afternoon David,

Thank you for the meeting request. I've CC'd Emily Atkinson to help find a date and time to get something on our calendars. I look forward to it and please let me know if there are any specific meeting materials or information you would like to discuss when we sit down.

Best,

Anne

Anne L. Idsal

Principal Deputy Assistant Administrator

U.S. EPA – Office of Air and Radiation

(202)564-6685 (direct)

(202)870-7547 (cell)

From: David Beaudreau <dbeaudreau@dclrs.com>
Sent: Wednesday, April 10, 2019 2:47 PM
To: Idsal, Anne <idsal.anne@epa.gov>
Subject: Meeting request on behalf of Composite Panel Association

Hi Anne,

Hope you're well. I am reaching out to see if you have a few minutes to meet next Friday, April 19? If not then, perhaps on April 23 or 24?

Jackson Morrill, the CEO of the Composite Panel Association (CPA), would like to meet with you to highlight some of their issues related to the upcoming biomass rule making coming out this summer. CPA includes the leading manufacturers of particleboard, medium density fiberboard and hardboard. Together they represent more than 92% of the total manufacturing capacity in US, Canada and Mexico. They have a nuanced position which is different from some of the wood related associations/industry groups.

<https://www.natlawreview.com/article/epa-announces-plan-to-classify-wood-based-power-carbon-neutral>

Thank you for considering this request.

Best,

David G. Beaudreau Jr.

Senior Vice President

D.C. Legislative and Regulatory Services, Inc.

2221 S. Clark Street, 11th Floor

Arlington, VA 22202

Main: 202-872-8440

Direct: 202-872-6884

www.dclrs.com

--

David G. Beaudreau Jr.

Senior Vice President

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Arlington, VA 22202

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Direct: 202-872-6884

www.dclrs.com



Message

From: Harlow, David [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B5A9A34E31FC4FE6B2BEADDDA2AFFA44-HARLOW, DAV]
Sent: 3/6/2018 10:18:24 PM
To: David M. (Max) Williamson [maxwilliamson@williamsonlawpolicy.com]
Subject: Re: Biogenic CO2 Coalition

I thank you for this, and for coming in to see us this afternoon.

As it happens, I'm taking the opportunity presented by a rare quiet afternoon to read those materials you left behind right now.

Sent from my iPhone

On Mar 6, 2018, at 5:08 PM, David M. (Max) Williamson <maxwilliamson@williamsonlawpolicy.com> wrote:

David, thank you for meeting today. Kyle Harris will follow up with materials, but I wanted you to have my electronic contact information.

Regards,

David M. (Max) Williamson | Williamson Law + Policy, PLLC
1850 M Street NW, Suite 840 | Washington, D.C. 20036 | (202) 256-6155

<image001.png>

www.williamsonlawpolicy.com | new
carbon future | bio | vCard | map | email

<image002.gif>

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Message

From: Rakosnik, Delaney [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=274573739A9F446883072599086EDED-RAKOSNIK, D]
Sent: 11/30/2018 3:36:24 PM
To: Boxerman, Samuel B. [sboxerman@sidley.com]
CC: Atkinson, Emily [Atkinson.Emily@epa.gov]; Josh Lewis (Lewis.Josh@epa.gov) [Lewis.Josh@epa.gov]
Subject: CONFIRMED RE: Meeting request

Dear Sam,

You are confirmed for a 45 min meeting with Bill Wehrum on 12/10, starting at 4pm.
Directions and procedures to 1200 Pennsylvania Avenue NW:

Metro: If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

Taxi: Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12th Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

Security Procedures: A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. If you are a foreign national entering on a non-US passport, please let us know in advance, as there is a separate clearance process.

Upon arrival, let the guards know that you were instructed to call 202-564-7404 for a security escort. Please send me a list of participants in advance of the meeting and feel free to contact me should you need any additional information.
Many thanks,

Delaney Rakosnik
Staff Assistant
Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406A, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-2229
Email: rakosnik.delaney@epa.gov

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Thursday, November 29, 2018 6:12 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Meeting request

Yes, let's confirm 12/10 at 4pm. For one hour?

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

From: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Sent: Thursday, November 29, 2018 1:30 PM
To: Boxerman, Samuel B. <sboxerman@sidley.com>
Subject: RE: Meeting request

Thank you for your available dates. Very helpful.

How about 12/10 at 4pm?

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Wednesday, November 28, 2018 4:39 PM
To: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Meeting request
Importance: High

Thank you for getting back to me.

It turns out that we now have a conflict among our team at that time. I hope I have this right, but I believe these are our available times on those dates:

12/10 – after 3:30pm

12/11 – btw 12:30pm and 2:30pm [least preferred date]

12/14 – after 1:00pm

12/17 – after 3:30pm

12/18 – after 1:30pm

12/19 – after 1:00pm

12/20 – any time

Please let me know if any of those dates/times would work for Bill.

Many thanks for your assistance,

- Sam

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

From: Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Sent: Wednesday, November 28, 2018 12:45 PM
To: Boxerman, Samuel B. <sboxerman@sidley.com>
Subject: RE: Meeting request

Dear Sam,

Bill Wehrum is happy to meet with you. How does December 18th at 11am work for your calendars?

Many thanks,

Delaney Rakosnik
Staff Assistant

Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406A, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-0935
Email: rakosnik.delaney@epa.gov

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Wednesday, November 28, 2018 9:57 AM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>; Rakosnik, Delaney <rakosnik.delaney@epa.gov>
Subject: RE: Meeting request
Importance: High

Good morning – Just circling back to see if there are options available to meet with Bill Wehrum on the proposed dates.

Many thanks for your assistance,
-- Sam

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

From: Atkinson, Emily <Atkinson.Emily@epa.gov>
Sent: Wednesday, November 21, 2018 7:53 AM
To: Boxerman, Samuel B. <sboxerman@sidley.com>
Subject: RE: Meeting request

Hi Sam,

We will review this request and Bill Wehrum's scheduler – Delaney Rakosnik – will be in touch next week to let you know about scheduling options.

Emily

Emily Atkinson
Special Assistant
Management Analyst

Immediate Office of the Assistant Administrator
Office of Air and Radiation, USEPA
Room 5406E, 1200 Pennsylvania Avenue NW
Washington, DC 20460
Voice: 202-564-1850
Email: atkinson.emily@epa.gov

From: Boxerman, Samuel B. <sboxerman@sidley.com>
Sent: Tuesday, November 20, 2018 4:00 PM
To: Atkinson, Emily <Atkinson.Emily@epa.gov>
Subject: Meeting request

Emily –

Good afternoon. On behalf of the National Alliance of Forest Owners (NAFO), we would request a meeting with Bill Wehrum. The purpose of the meeting would be to discuss biogenic CO2 emissions under the Clean Air Act. The proposed attendees:

Dave Tenny, NAFO

Chip Murray, NAFO

Sam Boxerman, Sidley Austin LLP (outside counsel for NAFO)

Russ Frye, FryeLaw PLLC (outside counsel to Packaging Corporation of America)

There may be other proposed attendees, but we would of course advise you in advance of our meeting in order to avoid any potential conflicts with any former clients of Mr. Wehrum or his law firm before he joined EPA.

We have availability at various times during the week of December 17 (except Friday, 12/21) – and would also have availability on 12/10-11. Please let me know available times for a meeting on those dates. We would request a 1 hour time slot.

If you have any questions, please contact me at your earliest convenience. Many thanks for your assistance,

-- Sam

SAMUEL B. BOXERMAN

SIDLEY AUSTIN LLP
+1 202 736 8547
sboxerman@sidley.com

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Message

From: Johnson, Yvonne W [Johnson.Yvonnew@epa.gov]
Sent: 5/16/2019 7:09:06 PM
To: Mathias, Scott [Mathias.Scott@epa.gov]
Subject: Updated SMathias_NAAQS Implem_TPs_May 14.pptx
Attachments: SMathias_NAAQS Implem_TPs_May 14.pptx

Here is the updated presentation. I am waiting on one more confirmation regarding a number from Butch on SO2 slide but other than that all edits have been made. I will make your notebook on Monday.

Thank you,

Yvonne W. Johnson

Special Assistant to the Director
Air Quality Policy Division
Office of Air Quality Planning & Standards
U.S. Environmental Protection Agency
919-541-3921
johnson.yvonnew@epa.gov



NAAQS Implementation and Other Updates

NACAA Fall Membership Meeting
October 22, 2019

Megan V. Brachtl, Group Leader, State and Local Programs Group

Matt Spangler, Operating Permits Group

Air Quality Policy Division

Office of Air Quality Planning and Standards

Overview

- NAAQS Review Update
- EPA Strategic Plan Priority Goals
 - Nonattainment Areas
 - SIP Process Improvements
- NAAQS Implementation Updates
 - Ozone
 - Sulfur Dioxide (SO₂)
- Exceptional Events
- Regional Haze
- Permitting



NAAQS Review Status

3

(October 2019)

	Ozone	Lead	Primary H ₂ O ₂	Primary SO ₂	Secondary (Ecological) NO _x , SO ₂ , PM ¹	PM ²	CO
Last Review Completed (final rule signed)	Oct. 2015	Sept 2016	April 2016	Feb 2019	Mar 2012	Dec 2012	Aug 2011
Recent or Upcoming Major Milestone(s)	<u>Sept/Oct 2019</u> Draft ISA and Draft PA ³ <u>Early 2020</u> Proposal <u>Late 2020</u> Final	TBD ⁴	TBD	TBD	<u>Timing of next steps is TBD</u> Final ISA; draft REA/PA	<u>Sept 5, 2019</u> Draft PA released to CASAC and public <u>Early 2020</u> Proposal <u>Late 2020</u> Final	TBD

Additional information regarding current and previous NAAQS reviews is available at: <http://www.epa.gov/ttn/naaqs/>

¹ Combined secondary (ecological effects only) review of NO_x, SO₂, and PM

² Combined primary and secondary (non-ecological effects) review of PM

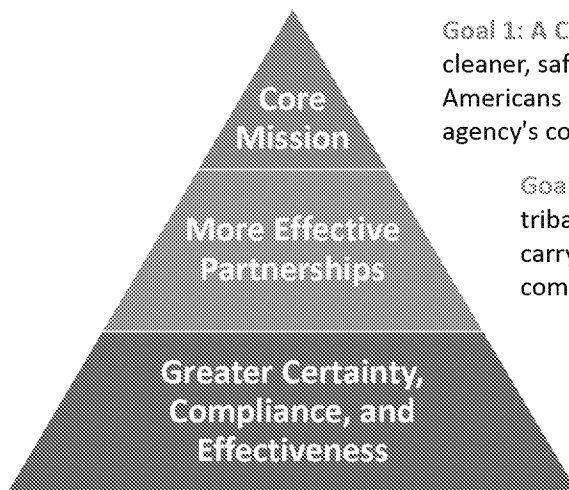
³ IRP – Integrated Review Plan; ISA – Integrated Science Assessment; REA – Risk and Exposure Assessment; PA – Policy Assessment

⁴ TBD = To be determined



EPA Strategic Plan Foundation

4



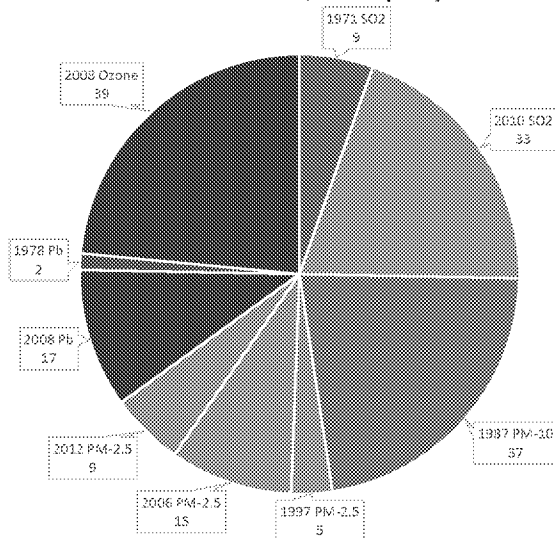
Goal 1: A Cleaner, Healthier Environment. Deliver a cleaner, safer and healthier environment for all Americans and future generations by carrying out the agency's core mission.

Goal 2: Provide certainty to states, localities, tribal nations and the regulated community in carrying out shared responsibilities and communicating results to all Americans.

Goal 3: Increase certainty, compliance and effectiveness by applying the rule of law to achieve more efficient and effective agency operations, service delivery and regulatory relief.



Nonattainment Areas for Non-revoked NAAQS on October 1, 2017 (166)

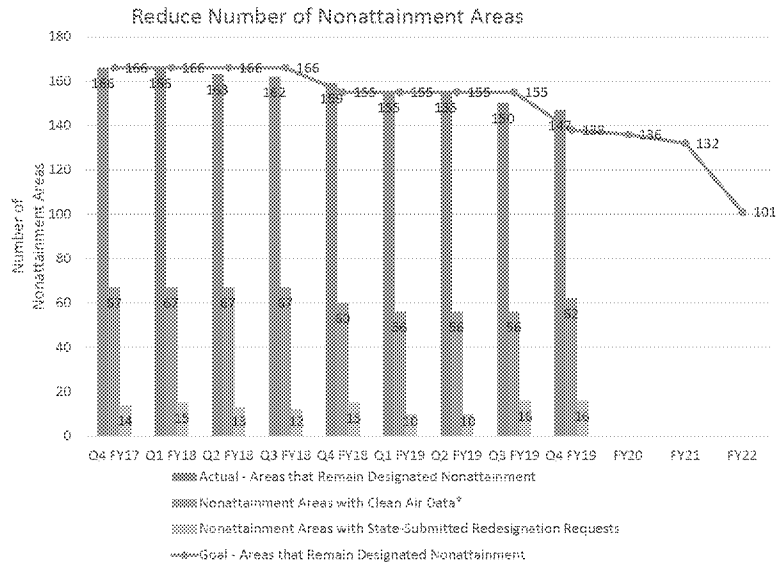


EPA Priority Goal: Reduce Number of Nonattainment Areas

- Work with states to prioritize redesignation request submissions.
- Ensure states have necessary rules, guidance, and tools.
- Improve the efficiency and effectiveness of the SIP/TIP process, including EPA's review process, to maximize timely processing of requested SIP/TIP actions.
- Take federal oversight actions, where necessary.
- For EPA to approve a state's requests to redesignate a nonattainment area, the request must meet the minimum Clean Air Act requirements, which include:
 - A demonstration that the area has air quality that is attaining the NAAQS;
 - Establishing that pollution reductions are due to implementing permanent and enforceable measures;
 - A 10-year maintenance plan that includes contingency measures to be triggered in the event of a re-violation of the NAAQS; and,
 - Satisfying any other applicable and outstanding attainment planning and emissions control requirements.

Agency Priority Goal: By September 30, 2022, EPA, in close collaboration with states, will reduce the number of nonattainment areas to 101 from a baseline of 166.

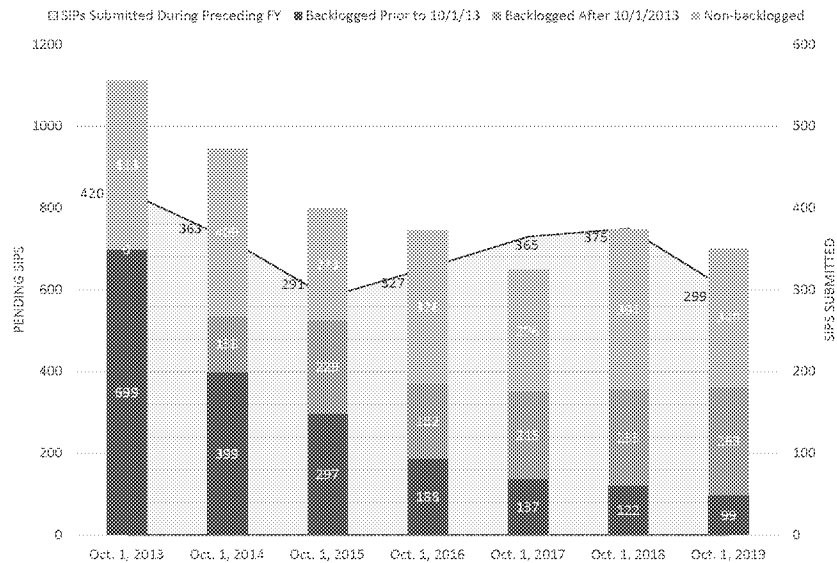
6



Improving State Implementation Plan Reviews

SIPs Pending EPA Review – 2013 to October 1, 2019

8

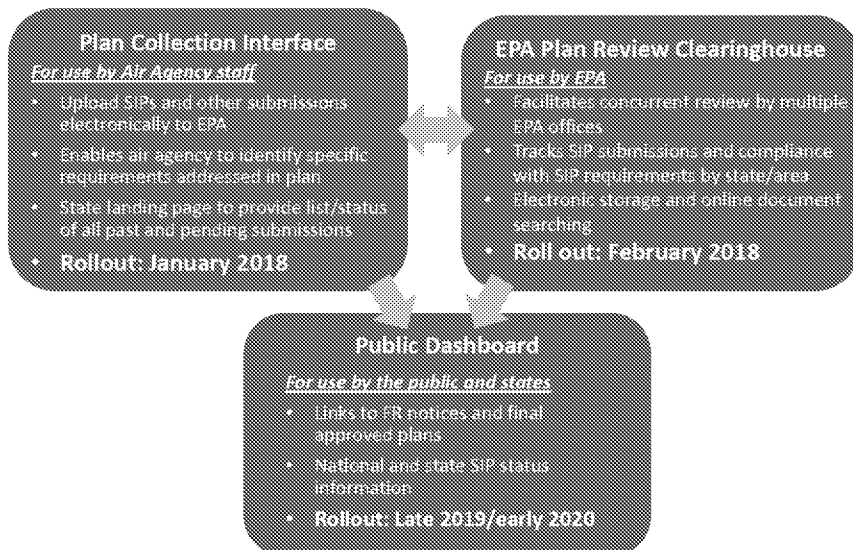


SIP Process Improvements

- Early engagement during SIP development
- 2015 Ozone NAAQS “Quick Start Guide”
- Upcoming activities:
 - Consider key backlog reduction techniques for the most difficult SIPs including withdrawal and disapproval
 - SIP Lean Guide
 - Update external-facing “SIP streamlining” website
 - Develop internal New Process Standard Operating Procedure
 - Further develop State Plan Electronic Collaboration System (SPeCS)



State Plan Electronic Collaboration System (SPeCS) for SIPs



SPeCS for SIPs (cont.)

- Since January 2018, states have submitted more than 500 submissions
 - > 448 official submissions and ~71 draft submissions
- Plans for 2019 and Beyond
 - Complete Public Dashboard
 - Develop the Administrator Module
 - Develop the Regional Haze Module
 - Develop an Exceptional Events Demonstration Module
 - Integrate SIP Lean Efforts into SPeCS
 - Continuously improve the State Plan Collection Interface and EPA Clearinghouse based on on-going user feedback



Pollutant-Specific Implementation Updates

Ozone and SO₂

2015 Ozone NAAQS Implementation Update

13

- * 52 areas initially designated nonattainment:
 - 51 areas (excluding San Antonio) effective August 3, 2018 (83 FR 25776; 6/04/18)
 - San Antonio, Texas area effective September 24, 2018 (83 FR 35136; 7/25/18)

Classification	Number of Areas	Attainment Deadline (years)	Attainment Date
Marginal	39	3	August 3, 2021* (2018-2020 DV)
Moderate	5	6	August 3, 2024
Serious	2	9	August 3, 2027
Severe-15	2	15	August 3, 2033
Extreme	2	20	August 3, 2038
Rural Transport (Marginal)	2	N/A	---
TOTAL	52		

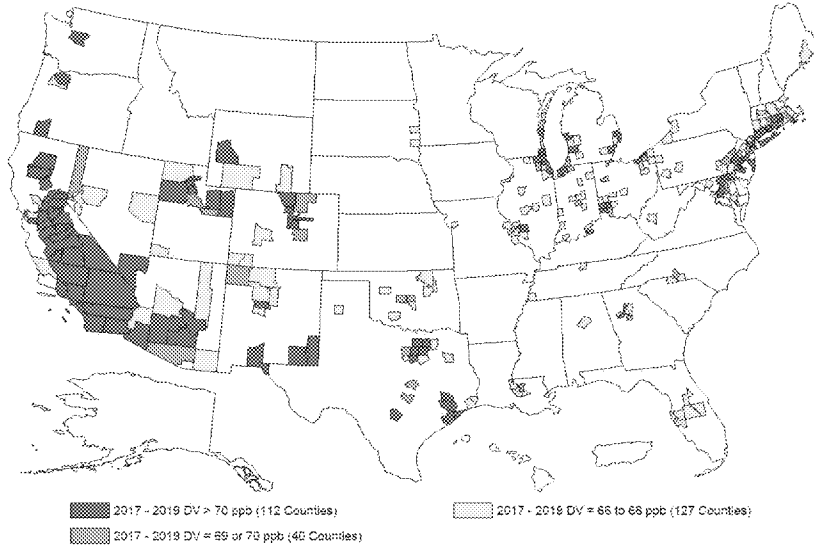
* Sep 24, 2021 for San Antonio, TX area

- * Columbus, OH area redesignated to attainment (84 FR 43508; 8/21/19)
- * Initial SIP submittals due August 3, 2020
 - Marginal areas: Emissions inv./statements
 - Moderate and above areas: Emissions inv./statements and RACT SIPs



Preliminary 2017-2019 Design Values for 2015 Ozone

(70 ppb NAAQS, 9/17/2019)



2015 Ozone NAAQS Implementation Update (cont.)

- Infrastructure SIP update
 - SIPs were due October 1, 2018
 - As of October 2, 2019, EPA has received 35 full submittals and 7 partial submittals
- Litigation on 2015 Ozone NAAQS SIP Requirements Rule
 - Final rule published December 6, 2018 (83 FR 62998)
 - Petitioners' brief filed July 22, 2019:
 - NNSR interprecursor trading
 - RFP requirements: milestone compliance demonstrations
 - RFP requirements: alternative baseline year
 - Early implemented contingency measures
 - EPA's reply brief due November 1, 2019; oral arguments timing TBD



2015 Ozone NAAQS Interstate Transport

- * EPA is actively reviewing submitted 2015 ozone NAAQS transport SIPs
 - * As of October 9, 2019, have received 40 of 56 states/jurisdictions
 - * Finalized approval action on 2 state SIPs
 - * Proposed approval on an additional 4 SIPs
- * Notice of Intent (NOI) to file mandatory duty deadline suit to make Findings of Failure to Submit (FFS) outstanding interstate transport SIPs that were due October 1, 2018
 - * On September 5, 2019, EPA announced its intent to make findings that certain states have failed to submit interstate transport SIPs for the 2015 ozone NAAQS. (see <https://www.epa.gov/airmarkets/interstate-air-pollution-transport>)
 - * EPA intends to issue FFS on November 22, 2019
 - * SIPs need to be “complete” to be excluded from the FFS



2008 Ozone NAAQS Implementation Update

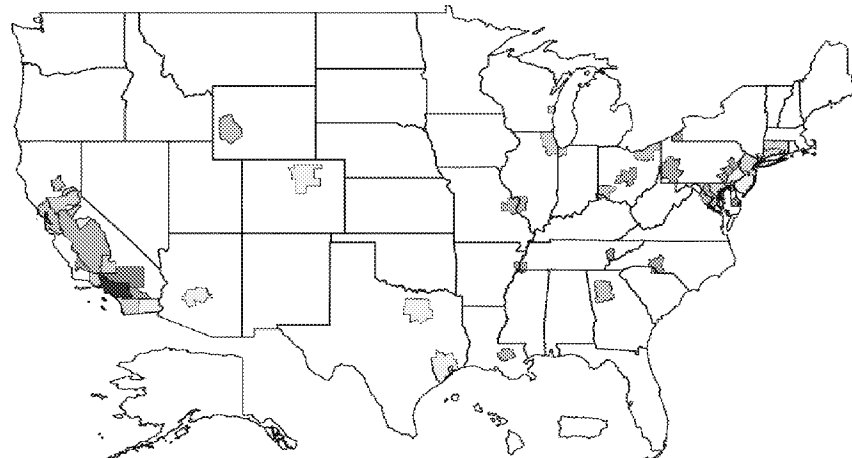
- Moderate area update
 - ◊ Moderate area Determinations of Attainment by the Attainment Date for 11 areas published August 23, 2019 (84 FR 44238), effective September 23, 2019
 - ◊ The action establishes new SIP submittal and RACT implementation deadlines for newly-reclassified Serious areas
 - ◊ 1-year attainment date extension for Sheboygan County, WI to July 2019
 - ◊ Separate related actions for Denver, CO; Phoenix, AZ; Imperial County, CA; and Kern County, CA
- 2008 Ozone NAAQS Interstate Transport
 - ◊ CSAPR Update – September 13, 2019, D.C. Circuit decision on Wisconsin v. EPA ruled for EPA on a number of issues but concluded that EPA's interpretation of the Good Neighbor Provision was unreasonable with regard to the timing of upwind emissions reductions. The court remanded the CSAPR Update without vacatur. EPA is currently reviewing the decision and discussing options.
 - ◊ CSAPR Closeout - On October 1, 2019, the D.C. Circuit on New York v. EPA vacated and remanded the CSAPR Closeout to EPA citing the Wisconsin decision.



Preliminary 2017-2019 Design Values for 2008 Ozone Nonattainment Areas

(75 ppb NAAQS; as of 9/3/19)

18



Preliminary 2017 - 2019 Design Value (ppb) as of September 03, 2019



1997 Ozone NAAQS Implementation Update

- ♦ The February 2018 *South Coast II* ruling upheld EPA's general authority to revoke a prior NAAQS with adequate antibacksliding protections ("controls") but reversed several key antibacksliding approaches for the revoked 1997 ozone NAAQS, including:
 - ♦ duty to reclassify areas upon failure to timely attain; and
 - ♦ "redesignation substitute" mechanisms to terminate antibacksliding controls
 - ♦ 2nd 10-year maintenance plans
- ♦ The ruling held that to remove antibacksliding requirements, areas that were designated nonattainment for the 1997 NAAQS at time of revocation needed to meet all redesignation requirements under CAA section 107(d)(3). Recent related proposed approvals include:
 - ♦ Houston-Galveston-Brazoria, TX area (84 FR 22093; 5/16/19)
 - ♦ Dallas-Fort Worth, TX area (84 FR 29471; 6/24/19)
- ♦ EPA provided "Resource Document" to assist states with preparing second 175A maintenance plans, including "limited maintenance plans." <https://www.epa.gov/ground-level-ozone-pollution/1997-ozone-national-ambient-air-quality-standards-naaqs-nonattainment>



2010 SO₂ NAAQS Implementation Update

- **Approved attainment plans:** Currently, 18 SIPs for the initial 29 Round 1 nonattainment areas have been approved. HQ is working with affected Regional Offices and states on addressing approvability issues for the remaining SIPs.
- **Mandatory duty deadline lawsuit:**
 - The Center for Biological Diversity, Center for Environmental Health and the Sierra Club (CBD) filed suit on June 14, 2018 (amended on December 17, 2018) to compel EPA to act on several SIPs submitted for Round 1 areas. The lawsuit also sought to compel EPA to issue findings of failure to submit (FFS) for several nonattainment areas designated in Round 2 or for the 1971 SO₂ NAAQS.
 - Draft consent decree (CD): On September 4, 2019, EPA published in the Federal Register a proposal notice under CAA section 113(g) for 30-day public comment:
 - › Take action on 12 submitted Round 1 SIPs by October 2020 (including one by April 2020).
 - › Issue FFS, which EPA already completed on September 9, 2019 (two areas).
- **Interstate transport:** EPA continues to make good progress approving submitting SO₂ interstate transport SIPs and continues to work with states to submit approvable SIPs addressing the good neighbor provision.



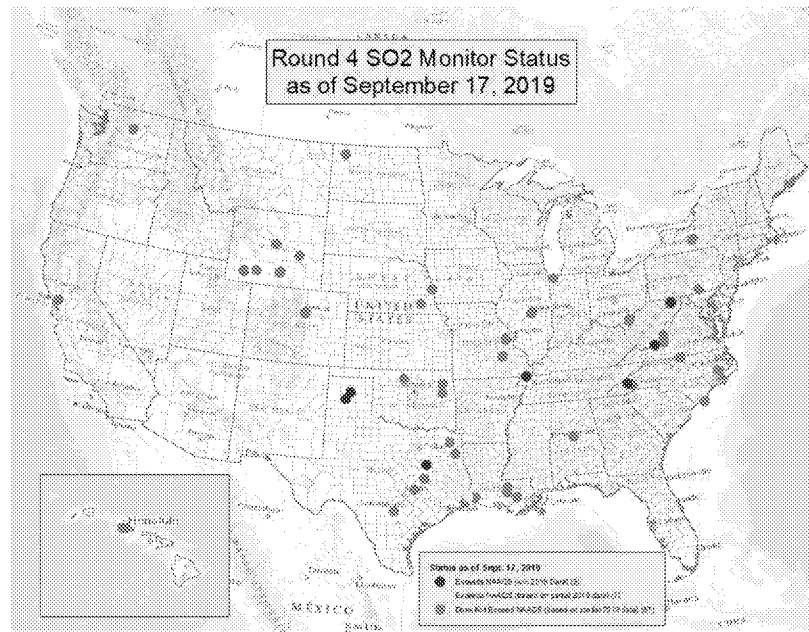
Round 4 SO₂ NAAQS Area Designations

- EPA must designate all remaining portions of the U.S. by December 31, 2020.
- Round 4 Process Guidance Memo issued September 5, 2019.

Milestone	Date
States and tribes certify 2019 SO ₂ monitoring data	No later than May 1, 2020
States and tribes may submit updated recommendations and supporting information for area designations to EPA*	No later than May 1, 2020
States submit exceptional events demonstrations for event-influenced SO ₂ monitoring data from 2017-2019	No later than May 1, 2020
EPA notifies states and tribes concerning any intended modifications to their recommendations (120-day letters)	On or about August 13, 2020
EPA publishes public notice of state and tribal recommendations and EPA's intended modifications, initiating a 30-day public comment period	On or about August 26, 2020 (No later than 130 days prior to final designations)
End of 30-day public comment period	On or about September 25, 2020
In response to EPA's intended designations, states and tribes submit additional information, if desired, to demonstrate why EPA's proposed modification in the 120-day letter to the state's recommended designation or boundary is inappropriate	No later than October 16, 2020
EPA signs notice promulgating final SO ₂ area designations for Round 4	On or about December 17, 2020 (No later than December 31, 2020)

* For any remaining undesignated area (i.e., those areas that installed and began operating EPA-approved SO₂ monitoring networks pursuant to the DRR and that have not been previously designated)





Exceptional Events Update

- EPA has concurred on 30 state demonstrations that were submitted since EPA revised the Exceptional Events Rule in September 2016
- We continue developing new guidance documents to help right-size demonstrations and facilitate the exceptional events process – Thank you for feedback on drafts!
 - **Stratospheric Ozone Intrusion Guidance – Released November 2018**
 - **Updated High Wind Dust Event Guidance – Released April 4, 2019**
 - **Clarification Memo on Data Modification – Released April 4, 2019**
 - **Prescribed Fire Guidance – Released August 9, 2019**
- EPA's exceptional events webpage provides key resources, including example demonstrations for Ozone and PM, and will continue to be updated as new materials become available

<https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events>



ADVANCE

www.epa.gov/advance

- * A collaborative effort by EPA, states, tribes and local governments to achieve ongoing emission reductions in areas designated as attainment/maintenance for ozone or PM_{2.5}.
- * Our current partners are located in 36 areas in 20 states and 9 of the 10 EPA Regions:

DE – Entire State	MO/KS – Kansas City	OK - Tulsa
GA – Middle Georgia (Macon)	MO – Southeast	OR - Lakeview
ID – Salmon	NV – Clark County (Las Vegas)	OR - Prineville
IA/IL/WI – Dubuque	NV – Washoe County (Reno)	SC – Entire State
KY – Jefferson County (Louisville)	NM – Dona Ana County (partial) (Las Cruces)	SC – Catawba Indian Nation
LA – Baton Rouge	NM – Eddy County (Carlsbad)	TX – Austin
LA – Houma-Thibodaux	NM – Lea County (Lovington)	TX – Corpus Christi
LA – Lake Charles	NM – San Juan County (Aztec, Farmington)	TX – Hood County (outside DFW)
LA – New Orleans	NC – Entire State	TX – Houston
LA – Shreveport	NC – Cumberland County (Fayetteville)	TX – San Antonio
MN – Entire State	NC – Mecklenburg County (Charlotte)	UT – Uinta Basin
MO/KS/OK – Joplin	OK – Oklahoma City	VT - Rutland
- * We are reaching out to areas with design values that are approaching the level of the NAAQS and that may be good candidates for Advance.
- * Management of the Advance program within OAQPS is shifting from the Outreach and Information Division to the Air Quality Policy Division.

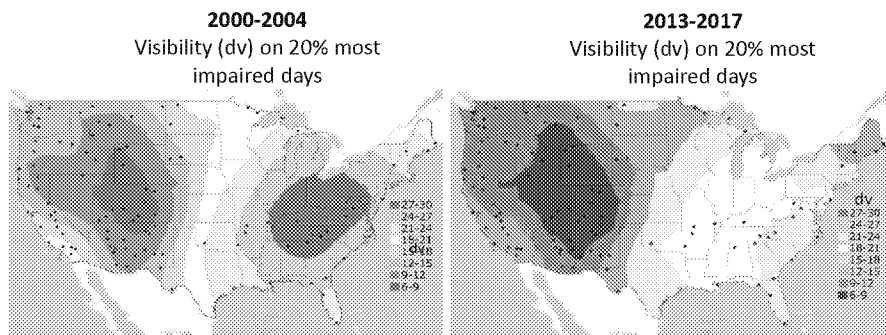


Regional Haze Program

- ♦ “Regional haze” is defined at 40 CFR 51.301 as “visibility impairment that is caused by the emission of air pollutants from numerous anthropogenic sources located over a wide geographic area.”
- ♦ The Regional Haze Rule (RHR or Rule) requires states to submit a series of State Implementation Plans (SIPs) to protect visibility in Class I areas, and governs states’ obligations and EPA’s review of periodic SIPs developed for the second and subsequent implementation periods.
- ♦ In January 2017, EPA issued a final rule updating the regional haze program, including revising portions of the visibility protection rule promulgated in 1980 and the Regional Haze Rule promulgated in 1999.



First Planning Period: Visibility is Improving



- The National Park Service estimates that as of mid-2014, emission controls established under the first planning period led to approximately 500,000 tons/year of SO₂ and 300,000 tons/year of NO_x reductions
- EPA estimates that visibility has improved significantly with the average visual range increased by 20 – 30 miles in Class I areas



Regional Haze: Ongoing Work

- Moving forward as described in the September 11, 2018, Regional Haze Reform Roadmap and supporting states for the second and future implementation periods:
 - 2018 Technical Guidance on Tracking Visibility Progress (completed Dec. 2018)
 - Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (completed August 2019)
 - 2028 Modeling including estimates of U.S. and international source contributions for Class I Areas (completed September 2019)
- Second planning period SIPs due by July 31, 2021
- EPA remains engaged in SIP development
 - Some states plan to submit in 2019
 - We encourage early engagement on all SIPs; Regional Offices are available for questions or preliminary feedback
 - We are participating in the CenSARA Regional Haze National Meeting, October 28-30 in St. Louis, MO



Permitting Related Updates

Stakeholder Input and EPA Air Permitting Priorities

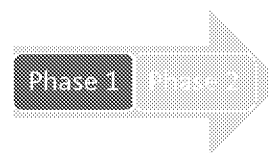
- **Stakeholder Input**

- Presidential Memorandum: "Streamlining Permitting and Reducing Regulatory Burdens for Domestic Manufacturing"
- E.O. 13777: "Enforcing the Regulatory Reform Agenda"
- General Themes
 - Permit Processing: Reduce timelines; allow more activities to proceed prior to receipt of permit
 - NSR Applicability: Streamline applicability determination process; provide flexibility and reduce number of projects subject to burdensome requirements
 - Control Technology: Simplify BACT determination process
 - Air Quality Impacts: Improve models; reduce conservatism; address ambient air issues
 - Emission Offsets: Provide more flexibility to expand offset availability

- Consistent with Stakeholder Input and Administration priorities, EPA is taking steps to clarify, revise, and streamline the NSR permitting program



Phase 1 NSR Actions



- Actual-to-Projected-Actual Applicability Test Memo
- Project Emissions Accounting (Guidance, Rule)
- Source Aggregation Guidance (Common Control, Adjacency)
- PM_{2.5} and Ozone SILs Guidance
- Ambient Air Guidance
- Project Aggregation Reconsideration Final Action
- Affordable Clean Energy Rule NSR Applicability Test
- Treatment of Biogenic CO₂ from Biomass Combustion



Actual-to-Projected-Actual Applicability Test Memo

- * **Memorandum: “New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected-Actual Applicability Test in Determining Major Modification Applicability”**
 - * Signed by Administrator Pruitt December 7, 2017
 - * Where a source projects an insignificant emissions increase, the level of actual emissions after the project governs applicability
 - * Projections may reflect the intent to actively manage post-project operations in order to prevent a significant emissions increase from occurring
 - * EPA will not second guess NSR applicability analyses that comply with the procedural requirements of the regulations



Project Emissions Accounting

- ♦ **Memorandum: “Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program”**
 - ♦ Signed by Administrator Pruitt on 3/13/18 (83 FR 13745; 3/30/18)
 - ♦ Memo Communicates EPA’s interpretation that the current NSR regulations provide that emissions decreases as well as increases are to be considered at Step 1 of the NSR applicability process, i.e., determining whether a project will result in a significant emissions increase
- ♦ **Proposed Rule (84 FR 39244, 8/9/19)**
 - ♦ Proposing revisions to the NSR regulations to fully clarify that both increases and decreases resulting from a project are to be accounted for under Step 1 of the applicability process for all project categories
 - ♦ Although the existing language in the NSR regulations supports this interpretation, rulemaking proposal is intended to clarify that and eliminate any uncertainty



Source Aggregation

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- **Common Control – Meadowbrook Letter**

- 4/30/18 letter to PA DEP clarified EPA's interpretation of "common control"
- Letter explains EPA's view that control means the power or authority of one entity to dictate decisions of the other that could affect the applicability of, or compliance with, relevant air pollution regulatory requirements

- **Common Control – Ameresco Letter**

- 10/16/18 letter to WI DNR further clarified EPA's interpretation of "common control"
- In a situation where two entities each exercise some level of control of a single, limited aspect of otherwise separate operations, it is reasonable to conclude that they are separate sources
- Shared activities should be allocated to a single source to avoid unworkable outcomes

- **Adjacency**

- 2016 Rulemaking clarified "adjacent" for oil and gas operations (within ¼ mile + shared equipment)
- **9/5/18: "Draft Guidance: Interpreting Adjacent for New Source Review and Title V Source Determinations in All Industries other than Oil and Gas"**
 - EPA interprets "adjacent" to mean physical proximity; No bright line or fixed distance
 - For operations not in physical proximity, the existence of functional interrelationship shall not be invoked to establish adjacency



PM_{2.5} and Ozone SILs Guidance

- ♦ **Guidance on Significant Impact Levels (SILs) for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program**

- ♦ Signed April 17, 2018 (Peter Tsirigotis, OAQPS)
- ♦ Revised PM_{2.5} SILs/new ozone SILs:
 - ♦ Based on new technical approach and legal rationale
 - ♦ Streamline the air dispersion modeling process for PSD
- ♦ Guidance comprised of (1) Policy memorandum; (2) Technical document and (3) Legal support document
 - ♦ Where SILs are used, reference all three and include in any permit record
 - ♦ Not final agency action; not binding for industry, permitting authorities, or the public



Ambient Air Policy

- **EPA defines “*ambient air*” as “that portion of the atmosphere, external to buildings, to which the general public has access” (40 CFR 50.1(e))**
 - EPA’s longstanding policy for implementing ambient air for PSD purposes was stated in a 1980 Costle letter, “*the atmosphere over land that is owned or controlled by the source and to which public access is precluded by a fence or other physical barriers*”
 - Subsequent guidance provided over the years by EPA to recommend how to apply 1980 policy statement for specific situations
- **Draft policy “Revised Policy on Exclusions from Ambient Air” issued 11/9/18**
 - Limited change to the way EPA applies regulatory definition of ambient air
 - Change would replace specific concept of a fence or other physical barriers with *measures, which may include physical barriers, that are effective in deterring or precluding access to the land by the general public*



Project Aggregation Reconsideration

- **Background:**
 - 2009 “Interpretive Rule” for Project Aggregation Established “substantially related” criterion for aggregating projects, and a 3-year rebuttable presumption against aggregating
 - NRDC petitioned for reconsideration and sued EPA on the 2009 Rule
 - EPA granted reconsideration and stayed the effectiveness of the 2009 Rule pending completion of the reconsideration or litigation
- **Final Action--Reconsideration Final Rule (83 FR 57324; 11/15/18):**
 - Retains the 2009 Rule without amending the rule text or the 2009 interpretation
 - Addresses notice and comment deficiencies and responds to other issues raised by NRDC
 - Lifts the stay of the 2009 Rule, making the rule effective



ACE Rule EGU Hourly Emissions Test

- As part of the ACE proposed rule, EPA proposed to incorporate an hourly emissions test for NSR modification applicability for EGUs
- Three options proposed
- Hourly test would be a tool for states to implement the ACE rule; adoption would not be mandatory
- NSR rulemaking severed from June 19 final ACE rule
- We're working on it



Treatment of Biogenic CO₂ in Air Permitting

- * FY2017, FY2018 and FY2019 Consolidated Appropriations Act outlines how EPA and other agencies are to establish consistent policies regarding the use of forest biomass for energy production including policies that reflect the carbon-neutrality of forest bioenergy
- * April 2018 EPA policy statement: Forthcoming regulatory actions will treat biogenic CO₂ resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral
- * We're working on it



Phase 2 NSR Actions



- Plantwide Applicability Limit Guidance
- Begin Actual Construction Guidance
- NSR Actual-to-Projected-Actual Applicability Test Guidance
- Tribal NSR Oil & Gas FIP
- NSR Error Corrections Rule
- NSR Rule Reconsiderations



Phase 2 NSR Actions (cont.)

- * **Plantwide Applicability Limit (PAL) Guidance**
 - * PAL regulations were established as part of 2002 NSR reform
 - * Guidance would address elements of the PAL regulations that stakeholders have identified as sources of perceived risk/disincentive
- * **Begin Actual Construction Guidance**
 - * Sources cannot legally “begin actual construction” of a major source or major modification without first obtaining a major NSR permit
 - * Guidance would explore potential flexibilities under the existing regulatory language to allow certain non-emitting activities to be undertaken prior to obtaining a permit
- * **NSR Actual-to-Projected-Actual Applicability Test Guidance**
 - * Guidance would address certain elements of the 2002 NSR reform rule applicability regulations



Phase 2 NSR Actions (cont.)

- Tribal NSR Oil & Gas FIP
 - Proposed rule Part I Registration Form streamlining amendment, (84 FR 33715, 7/15/2019); comment period closed 9/13/19
- NSR Error Corrections Rule
 - Stand-alone rule to correct errors in NSR regulations
- NSR Rule Reconsiderations (in progress)
 - Ethanol Rule
 - Reasonable Possibility Rule
 - Fugitive Emissions Rule



Other Permitting Actions and Updates

- MACT Once In Always In Policy (Guidance, Rule)
- Title V Petitions & Petitions Process Rule
- Title V Petitions: NSR Interface
- Permitting Process Improvements
- E-Guidance Compendium
- Training



MACT Once In Always In Policy

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- * **Memorandum: “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act” (“MM2A memo”)**
 - * Signed by AA Bill Wehrum 1/25/18
 - * Withdraws 1995 Seitz memo “Once In Always In” (OIAI) policy
 - * Memo addresses when a major source subject to a maximum achievable control technology (MACT) standard, under section 112 of the Clean Air Act (CAA), may be reclassified as an area source and no longer subject to MACT requirements
 - * *Major source becomes area source at such time that source takes an enforceable limit on its potential to emit HAP below the major source thresholds (10 tons per year [tpy] of a single hazardous air pollutant or 25 tpy of any combination of HAP)*
- * **2019 MM2A Proposal** (84 FR 36304, 7/26/2019)
 - * Addresses questions received after 2018 MM2A Memorandum issued
 - * Reclassification process; Criteria for establishing effective PTE HAP limitations
 - * Supersedes and replaces 2007 NPRM NESHAP: General Provision Amendments; addresses reclassification issues covered in 2007 NPRM
 - * Timing for compliance with applicable NESHAP standards; Notification requirements; Recordkeeping requirements; Interaction with enforcement actions
 - * Comment period extended, closes 11/1/19



Title V Petitions & Petitions Process Rulemaking

- Title V Petitions continue to be a substantial work load

	<u>FY 2018</u>	<u>FY2019 (thru Sept.)</u>
Petitions Received	11	12
Petitions Resolved	34	21

- Trends: Increased focus on wood pellet manufacturing

- **Title V Petitions Process Rulemaking**

- Proposed rule August 15, 2016 (81 FR 57822); Final expected Fall 2019
- Proposal included changes in 3 key areas: method of petition submittals, required content/format of petitions; administrative record requirements for states.



Title V Petitions – NSR Interface

- PacifiCorp Hunter Order (10/16/2017) – EPA will not look back at decisions made in NSR permitting process in the context of Title V
 - Permitting agencies and EPA need not reevaluate- in the context of title V permitting, oversight, or petition responses- previously issued final preconstruction permits, especially those that have already been subject to public notice and comment and an opportunity for judicial review
 - Concerns with these final preconstruction permits should instead be handled under the authorities found in title I of the Act (e.g., enforcement actions under CAA § 113 or 167, state court appeals of preconstruction permits, or citizen enforcement actions under CAA § 304)
 - Where a final preconstruction permit has been issued, whether it is a major or minor NSR permit, the terms and conditions of that permit should be incorporated as "applicable requirements"
- Big River Steel Order (10/31/2017) – Applies same interpretation to fact set involving merged NSR/Title V program



Permitting Process Improvements

- **Increased use of electronic systems**
 - Central Data Exchange (CDX) for receipt of Title V petitions
 - Electronic Permitting System (EPS)
 - Working with 35 state and local programs to develop system that will allow electronic submittal of state-issued NSR, Title V, and other permits for EPA review
 - Also electronic processing of EPA-issued NSR and title V permits
 - Replacing and modernizing RACT/BACT/LAER Clearinghouse
- **EPA Permit Oversight Policy & Framework**
 - Goal is to develop a national approach to oversight of permits and permitting programs that is consistent and standardized
 - Would apply to the following EPA & state permit programs: NSR, Title V, NPDES, Underground Injection Control (UIC), and RCRA

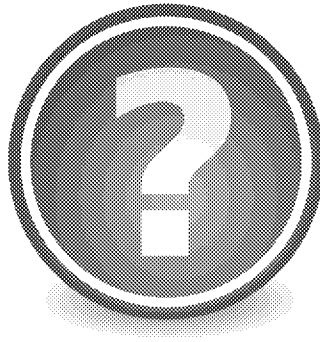


Permitting References/Training

- E-Guidance Compendium
 - Enhancement to current NSR website
 - Organizing current guidance documents in NSR index by topic
- Training



Questions and Comments



NAAQS Implementation Milestones (October 2019)

Pollutant	Final NAAQS Signature	Nonattainment Designations Effective	Infrastructure SIP Due	Attainment Plans Due	Attainment Date
PM _{2.5} (2006)	Oct 2006	Dec 2009	Oct 2009	Dec 2014	Dec 2015 (Moderate) Dec 2019 (Serious)
Pb (2008)	Oct 2008	Dec 2010-2011	Oct 2011	June 2012-2013	Dec 2015-2019
PM _{2.5} (2012)	Dec 2012	Apr 2015	Dec 2015	Oct 2015 (Moderate)	Dec 2021 (Moderate) Dec 2025 (Serious)
NO _x (2010) (primary)	Jan 2010	Feb 2012	Jan 2013	N/A	N/A
SO ₂ (2010) (primary)	June 2010	Oct 2013, Sept 2016, Apr 2018 (early 2021)	June 2013	Apr 2015, Mar 2018, Oct 2019 (mid 2022)	Oct 2018, Sept 2021, Apr 2023 (early 2026)
Ozone (2005)	Mar 2008	July 2012	Mar 2011	July 2015-2016*	July 2021-2032
Ozone (2015)	Oct 2015	Aug 3, 2018 (Sep 24, 2018 for San Antonio, TX)	Oct 2018	Aug 2021-2022	Aug 2021-2038

* January 2017 for areas reclassified from Marginal to Moderate. August 2020 for areas reclassified from Moderate to Serious.



Message

From: Johnson, Yvonne W [Johnson.Yvonnew@epa.gov]
Sent: 9/10/2019 8:17:30 PM
To: Mathias, Scott [Mathias.Scott@epa.gov]
Subject: SLPG updated fall presentation slide updates
Attachments: SMathias_NAAQS Implem_August 26_FINAL_TPs_slpg_9-9-19.pptx

Importance: High

Here is the latest version of the full slide deck with SLPG's recent edits.

Thank you,

Yvonne W. Johnson

Special Assistant to the Director
Air Quality Policy Division
Office of Air Quality Planning & Standards
U.S. Environmental Protection Agency
919-541-3921
johnson.yvonnew@epa.gov

From: Lingard, Robert
Sent: Tuesday, September 10, 2019 2:32 PM
To: Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>
Cc: Brachtl, Megan <Brachtl.Megan@epa.gov>; Wallace, Larry <Wallace.Larry@epa.gov>; Kuhn, Keith <kuhn.keith@epa.gov>; South, Mia <South.Mia@epa.gov>; Damberg, Rich <Damberg.Rich@epa.gov>; Sutton, Lisa <Sutton.Lisa@epa.gov>; Stackhouse, Butch <Stackhouse.Butch@epa.gov>; Herrington, Leigh <Herrington.Leigh@epa.gov>; Selbst, Elizabeth <selbst.elizabeth@epa.gov>; Senter, Stephen <Senter.Stephen@epa.gov>
Subject: PENCILS DOWN: fall presentation slide updates
Importance: High

Thanks everybody for your prompt slide updates!

Yvonne – here's the status of SLPG slides (yellow indicates updates):

- 5 – county maps: CURRENT, NO UPDATES
- 6 and 7 – strategic plan: slide 7 (NEW) updates slide 6 (OLD) with new labels/descriptions from 9/09 Wheeler email
- 8 – nonattainment areas pie chart: CURRENT, NO UPDATES
- 9 – nonattainment areas bar chart: UPDATED
- 11 – SIP backlog bar chart: UPDATED
- 12 – SIP process: CURRENT, NO UPDATES
- 13 and 14 – SpeCS submission counts on slide and TPs: UPDATED
- 16 – 2015 O3: CURRENT, NO UPDATES
- 17 – prelim 2017-2019 DV map for 2015 O3 NAAQS: NEW SLIDE
- 18 – 2015 O3 iSIP & litigation: CURRENT, NO UPDATES
- 19 – 2015 O3 interstate transport: GSG SLIDE, NO UPDATES
- 20 – 2008 O3 recent actions: UPDATED

- 21 – prelim 2017-2019 DV map for 2008 O3 NAAQS: NEW SLIDE
- 22 – 1997 O3: CURRENT, NO UPDATES
- 23 – SO2 actions & litigation: UPDATED
- 24 and 25 – PM2.5 area counts and actions: CURRENT, NO UPDATES
- 26 – Lead: CURRENT, NO UPDATES

Share version is still accessible, and I've attached an offline copy. Please holler with questions or requests.

Thanks,
Bob



NAAQS Implementation Updates

AAPCA Fall Meeting
Raleigh, North Carolina
August 27, 2019

Scott Mathias, Acting Director, Air Quality Policy Division
Office of Air Quality Planning and Standards

FULL DECK FINAL w/TPs 8/27/2019

Thank you _____(hosts) for inviting us to share information about Clean Air Act programs with all of you.

Today I will provide the update on implementing the National Ambient Air Quality Standards, and my colleague _____ will provide updates on activity in Clean Air permit programs.

Overview

- ♦ NAAQS Review Update
- ♦ Perspective on NAAQS Progress
- ♦ EPA Strategic Plan Priority Goals
 - ♦ Nonattainment Areas
 - ♦ SIP Process Improvements
- ♦ NAAQS Implementation Updates
 - ♦ Ozone
 - ♦ Sulfur Dioxide (SO₂)
 - ♦ Fine Particulate Matter (PM_{2.5})
 - ♦ Lead (Pb)
- ♦ Exceptional Events
- ♦ Regional Haze
- ♦ Permitting



Overview

- NAAQS Review Update
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 - Fine Particulate Matter (PM_{2.5})
 - Lead (Pb)
- Exceptional Events
- Regional Haze
- Permitting



NAAQS Review Status

(August 2019)

	PM ¹	Ozone	Secondary (Ecological) NO ₂ , SO ₂ , PM ²	CO	Lead	Primary NO ₂	Primary SO ₂
Last Review Completed (final rule signed)	December 2012	October 2015	March 2012	August 2011	September 2016	April 2018	February 2019
Recent or Upcoming Major Milestone(s)	<u>Summer/Fall 2019</u> Draft: PA <u>Early 2020</u> Proposal <u>Late 2020</u> Final	<u>Fall 2019</u> Draft: ISA and Draft: PA ³ <u>Early 2020</u> Proposal <u>Late 2020</u> Final	<u>Timing of next steps is TBD</u> Final ISA; draft: REA/PA	TBD ⁴	TBD	TBD	TBD

Additional information regarding current and previous NAAQS reviews is available at: <http://www.epa.gov/nnaaqs/>

¹ Combined primary and secondary (non-ecological effects) review of PM

² Combined secondary (ecological effects only) review of NO₂, SO₂, and PM

³ IRP – Integrated Review Plan; ISA – Integrated Science Assessment; REA – Risk and Exposure Assessment; PA – Policy Assessment

⁴ TBD = To be determined

4

HEID 8/12/19

A key component to fulfilling EPA's mission is establishing health-protective ambient air quality standards for each of the 6 criteria air pollutants.

Our current activity is focused on 3 reviews: PM, Ozone, and Secondary ecological review for NO₂, SO₂, and PM

PM: Planning to issue the Policy Assessment shortly followed by a review of that document by the Clean Air Science Advisory Committee (CASAC) scheduled for October 2019. Proposal 1st quarter 2020 (March), Final December 2020.

Recently CASAC, as part of its advice to the Agency on the draft Integrated Science Assessment (ISA), requested that the EPA establish a panel of experts to aid its review of future NAAQS documents.

The Administrator responded to this request, and other CASAC advice on the draft ISA, in a letter dated July 25, 2019.

In that letter the Administrator expressed his intent to "create a pool of subject matter expert consultants" to provide feedback to the chartered CASAC to aid in its review of the scientific and technical aspects of the NAAQS review documents, and to have this pool of consultants available to the CASAC by August 31, 2019.

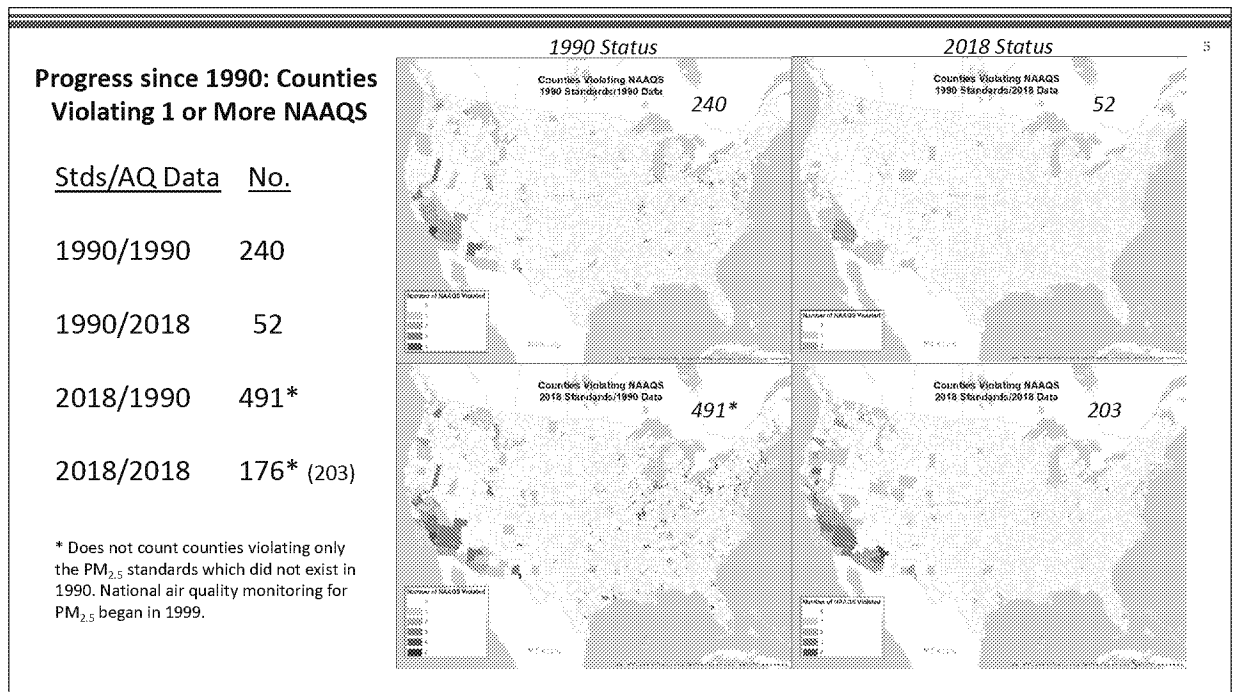
To recruit these consultants, EPA's Science Advisory Board Office Staff published a FR notice on August 7, 2019, requested public nominations. The deadline for nominations was August 21, 2019, and those nominations are now under review.

Ozone: The ISA is scheduled for release in September, followed shortly by the PA in October. CASAC review of both by the end of 2019; Proposal 1st half of 2020 (to June), Final 12/2020.

2015 Ozone NAAQS Litigation: Several environmental and health organizations, industry groups, and some states filed petitions for judicial review following issuance of the NAAQS in October 2015 (Murray Energy v. EPA, No. 15-1385, and consolidated cases). The D.C. Circuit heard oral argument in those challenges on December 18, 2018, and issued a final opinion on August 23, 2019. In brief, the opinion upheld the primary ozone standard, but remanded the secondary public welfare standards (aimed at protecting animals, crops and vegetation) for reconsideration by EPA. They also vacated the permit grandfathering mechanism that EPA had established as a transition from the 2008 to the 2015 NAAQS.

Secondary Ecological: While progress has been made, the timing of next steps in that review is still being determined.

Others: Finally, there are currently no specific schedules for the reviews for CO, Lead, Primary NO₂, and Primary SO₂.



[NO UPDATES 9/09]

[8/23 Used light background maps from Doug Solomon.]

Now, for a different view of progress in implementing the Clean Air Act than you may have seen in the past.

I worked with our air quality data analysts to paint a picture of how far the U.S. has come in meeting ambient air quality standards.

I think these maps tell a story of both tremendous progress, but illustrate there is still work to do.

They depicts an evaluation of 1990 and 2018 air quality data against standards that existed in 1990 and in 2018, based on counties with monitors.

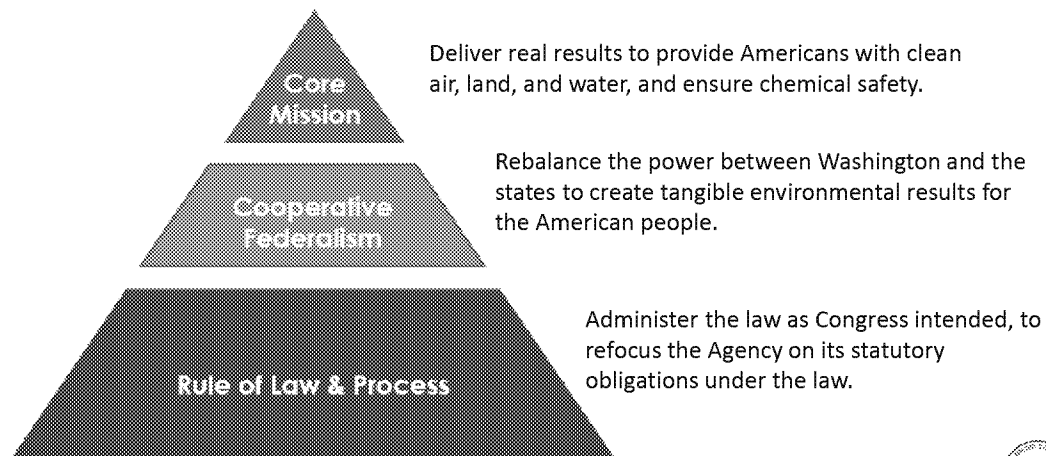
Regardless of which set of standards you evaluate, there are far fewer counties with violating monitors today (right side panels) than in 1990 (left side panels).

Nearly 80% reduction for 1990 standards

About 65% reduction in terms of current standards

However, today there are still more than 200 counties exceeding ambient standards, including 40 counties that violate 2 or more standards.

EPA Strategic Plan Foundation



The current Administration has established goals within each of the three strategic goal areas. The ones that relate most specifically to OAQPS programs, including the programs I will address today, fall under Goal 1 "Core Mission" and Goal 3 "Rule of Law & Process"

Specifically (1) "Improve Air Quality" as indicated by reducing the number of nonattainment areas for the 6 criteria pollutants, and eliminating the backlog of State Implementation Plan reviews, (2) "Streamline & Modernize" through speeding up environmental permitting, and (3) "Improving Efficiency & Effectiveness" through use of the LEAN management system



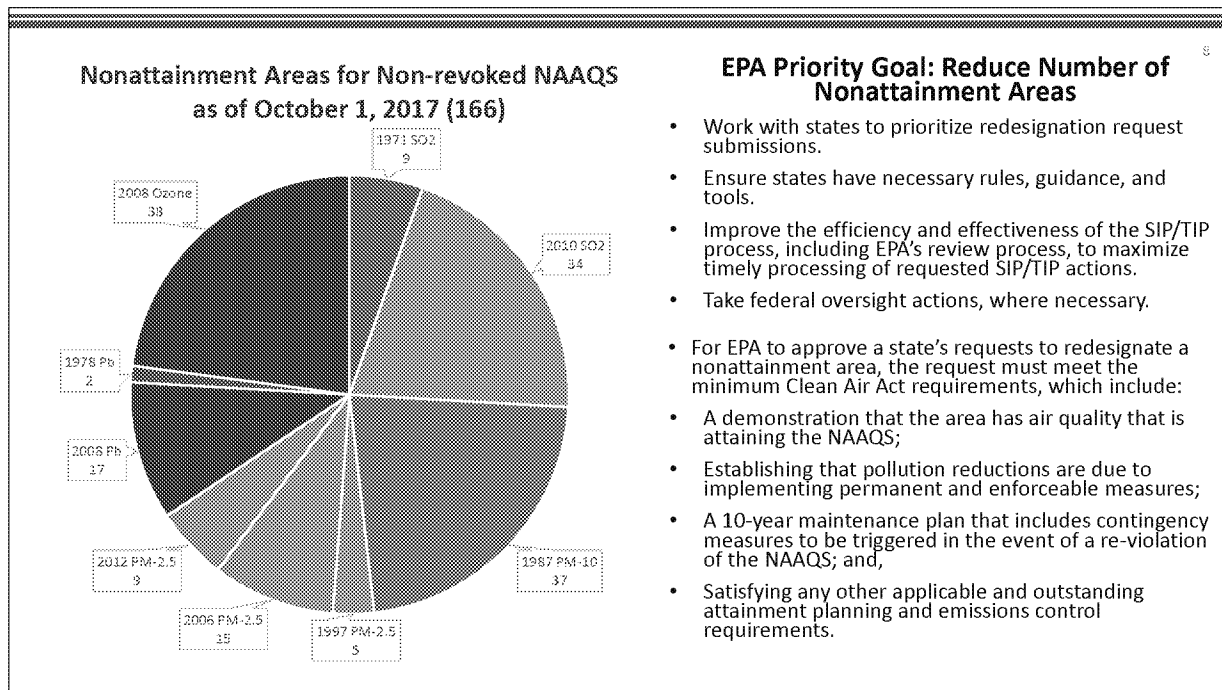
[NEW SLIDE 9/10] – per Rich D., new slide updates and replaces preceding slide with new labels/descriptions from Wheeler 9/09 email.

Now I want to mention activities associated with EPA's Strategic Plan.

The Administration has established goals within each of the three strategic goal areas. The ones that relate specifically to my office's programs, including the programs _____(name) and I are addressing today, are under Goal 1 "Core Mission" and Goal 3 "Greater certainty, compliance, and effectiveness"

Specifically they include: (need to check these)

- (1) "Improve Air Quality" as indicated by reducing the number of nonattainment areas for the 6 criteria pollutants, and eliminating the backlog of State Implementation Plan reviews,
- (2) "Streamline & Modernize" through speeding up environmental permitting, and
- (3) "Improving Efficiency & Effectiveness" through use of the LEAN management system



[NO UPDATES 9/09]

Looking first at nonattainment areas and how we are tracking progress on redesignating areas to attainment.

This pie chart shows the breakdown of the 166 nonattainment areas we began tracking in 2017. It indicates how many areas are associated with each of the pollutant standards.

More than a quarter (26%) of the areas are nonattainment for Sulfur Dioxide, and 22% each for 2008 Ozone and 1987 PM10.

We recognize that the entire universe of nonattainment areas is larger than this pie shows. Since 2017 additional areas have been designated nonattainment for the 2010 SO₂ standard and the 2015 ozone standard. Also, a court decision affecting the revoked 1997 and 1-hour ozone standards has brought some of those areas back into active regulatory consideration.

Universe of NAAs (August 2019) = 303 areas

166 is now 148

Add'l 2010 SO₂ = 6 areas

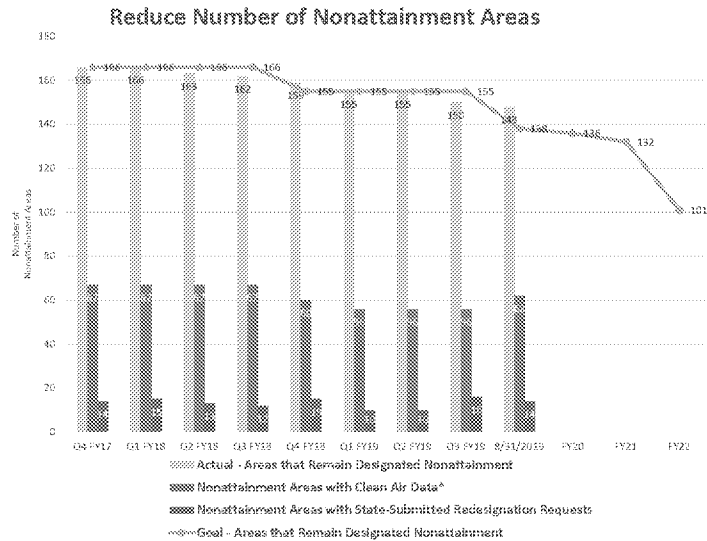
Add'l 2015 Ozone = 51 areas (was 52, minus Columbus)

Add'l 1997 Ozone = 35 areas

Add'l 1-hr Ozone = 63 areas

Agency Priority Goal: By September 30, 2022, EPA, in close collaboration with states, will reduce the number of nonattainment areas to 101 from a baseline of 166.

9

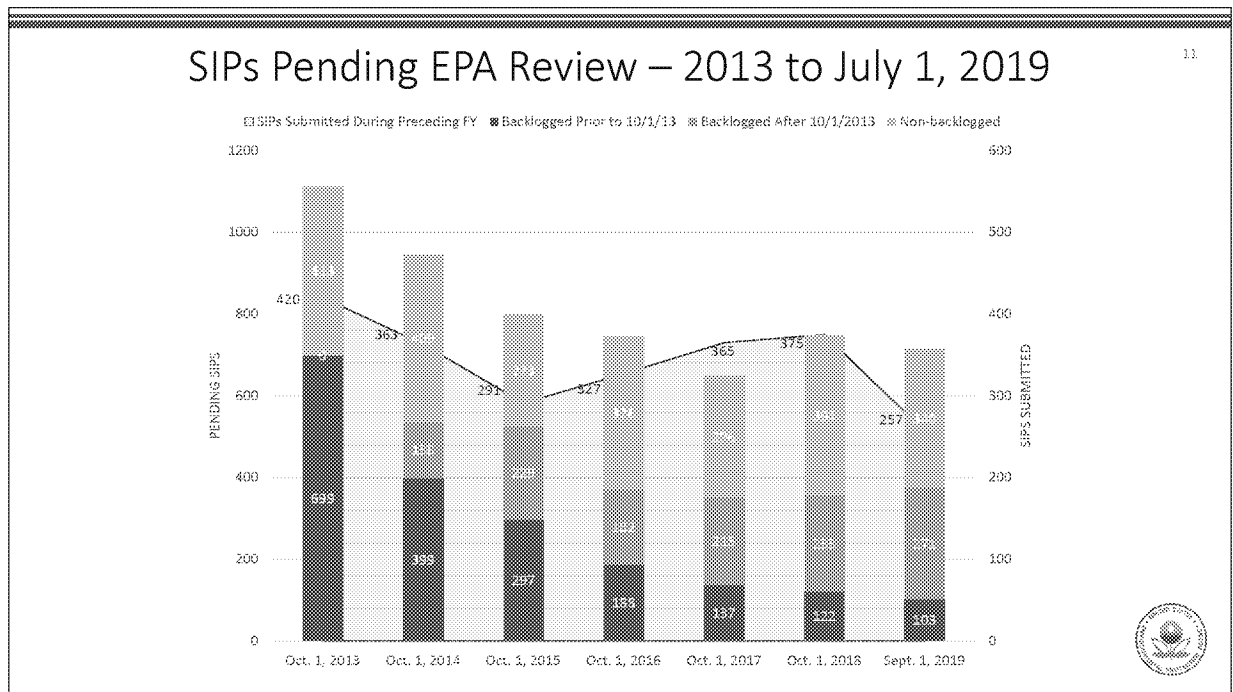


Improving State Implementation Plan Reviews

Another area of focus under the Strategic Plan is to eliminate that backlog of state implementation plans (SIPs)

The backlog consists of SIP submissions that have been under EPA review for more than the time allotted under the statute for EPA to complete its review.

Our strategy involves both (1) taking timely action on new SIPs as they come in to prevent them from becoming backlogged, and (2) eliminating the older SIPs in the backlog in a manner that prioritizes actions that matter most to air management agencies and to environment protection.



[UPDATED 9/09]

To give you a sense of this challenge, this graphic captures both the inflow of SIPs and the backlog status for the last several years.

Scale on right side (different than left side) = number of SIPs submitted each year (light blue shading under the dotted line): Average nearly 360 (actual 357) SIP submissions per year for last 6 fiscal years [Range 420 in FY2013 to 291 in FY2015]. Thus far in FY2019 we have received 257 submissions.

Turning to the left side scale: This shows the total number of pending SIPs and the backlog trend. A SIP submission is defined as “backlogged” when EPA has not taken final action to approve/disapprove that submission within 18 months of the submission date.

Since the backlog may change daily, it is typically expressed “as of” a given date. So each of the data points on the charts capture the volume at specific points in time – end of fiscal years 2013 thru 2018 (start of fiscal years 2014-2019), and up through September 1, 2019 (first 11 months) for the current fiscal year.

Currently in 2019, EPA has about 714 SIP submissions that are pending final review and action. About half of those are considered backlogged.

That backlog has remained relatively steady in the range of 350-390 SIPs since 2016 (see sum of the bottom two blue shades of each bar).

However, the historic backlog (dark blue) has been about 85% eliminated.

SIP Process Improvements

- Early engagement during SIP development
- Ozone Quick Start Guide
- Upcoming activities:
 - Consider key backlog reduction techniques for the most difficult SIPs including withdrawal and disapproval
 - SIP Lean Guide
 - Update external-facing “SIP streamlining” website
 - Develop internal New Process Standard Operating Procedure
 - Further develop State Plan Electronic Collaboration System (SPeCS)



[NO UPDATES 9/10]

As I said, our approach is focusing both on acting on the incoming SIPs before they become backlogged, and also chipping away at the backlog.

These involve different strategies, and represent a collective effort of EPA Regions and Headquarters Offices working together to better the entire process. This includes developing and using LEAN management tools, and incorporating valuable input from knowledgeable state agency personnel.

Looking ahead, an important aspect of achieving our goals is early engagement between air agencies and EPA on SIPs under development. We know that air agencies are working to develop approvable SIPs, and EPA supports that and would like to defer to air agencies and support their choices. We also appreciate that once a SIP is too far down the developmental path, there can be significant obstacles for making further revisions.

We want air agencies to coordinate with EPA before that juncture – which we appreciate may look different for different air agencies. But, the important aspect of early engagement is that there is enough time for EPA to provide meaningful feedback and for air agencies to take that feedback under advisement to ensure that the SIP submitted will be approvable.

Soon we will Begin a New Phase of Deploying Process Improvements Starting in Fiscal Year 2020 (October)

To address the Backlog, there are a Series of Efforts that include:

Regions discussing with air agencies the possibility of withdrawing SIPs that may, for example, be superseded by a subsequent submittal or are otherwise no longer needed.

Also, we intend to charter “Tiger Teams” to resolve issues impacting groups of backlogged SIPs across Regions.

To facilitate early engagement, EPA is developing a SIP Lean Guide which is intended to provide specific steps to support interactions between air agencies and EPA.

This document will be similar to the Ozone Quick Start Guide issued in Feb 2019, which was a tool to support early engagement on a particular type of SIP for the 2015 ozone standards.

We expect to provide an opportunity for informal feedback on the SIP Lean Guide in the fall of 2019 and will share the draft with ECOS, NACAA, and AAPCA for feedback.

We are also working on new internal processes as a result of what we have learned in our Lean efforts over the past year.

And we are also continuing our development of the State Plan Electronic Collaboration System (SPeCS). Among other things, this system is expected to improve the transparency of the status of EPA's SIP reviews.

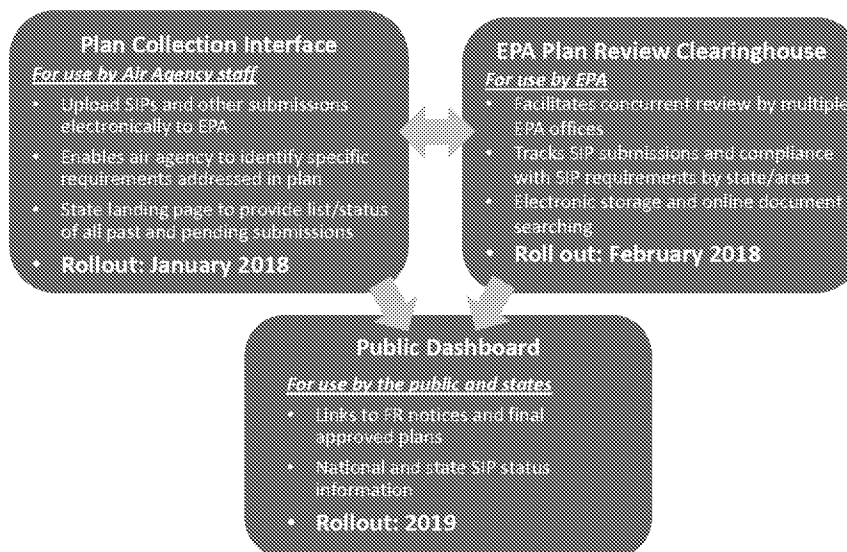
BACKGROUND on QUICK START

On February 26, 2019, EPA posted the Quick Start Guide at: <https://www.epa.gov/air-quality-implementation-plans/guidance-streamlining-sip-process>

Document brings together EPA and state air agency work to “lean” SIP development and processing with requirements associated with attainment planning for 2015 ozone NAAQS nonattainment areas and OTR states

Checklists lay out a sample timeline of key milestones intended to help EPA, state and local air agencies collaborate early and throughout the SIP development process for the 2015 8-hour ozone standard

State Plan Electronic Collaboration System (SPeCS) for SIPs



[UPDATED 9/10]

To refresh you on where we are with SPeCS, this shows the 3 main components of the system. I want to note that since rolling out the Plan Collection Interface in January 2018, states have submitted a total of 504 submissions using the new system (434 official submissions and 68 draft submissions).

This past year EPA has been focusing efforts on continuing to develop the Internal Clearinghouse and the Public Dashboard. The Clearinghouse is the EPA-facing portion of the system that manages and tracks submissions, and is where we are absorbing the functionality of several legacy IT and data management systems. These legacy systems contain decades worth of SIP information.

A main focus this current year is rollout of the Public Dashboard. This is where state agency personnel and the public will have access to information about the status of SIP submissions.

SPeCS for SIPs (cont.)

- Since January 2018, states have submitted a total of 502 submissions
 - 434 official submissions and 68 draft submissions
- Plans for 2019 and Beyond
 - Complete Public Dashboard
 - Develop the Administrator Module
 - Develop the Regional Haze Module
 - Develop an Exceptional Events Demonstration Module
 - Integrate SIP Lean Efforts into SPeCS
 - Continuously improve the State Plan Collection Interface and EPA Clearinghouse based on on-going user feedback



[UPDATED 9/10]

In addition to the Public Dashboard, we intend to turn our attention to developing modules for Regional Haze SIPs and Exceptional Events Demonstrations. [Q&A-Maybe 179B(b) demos in future.]

We will also be looking to incorporate what we are learning from our SIP LEAN efforts into the functionality of SPeCS.

Realistically we do not expect to see significant progress on the backlog until late in 2020 because it takes time for our use of all these strategies and tools to yield results.

But I do want to emphasize that we want to continue hearing from air agencies about what additional tools and resources would be most helpful in supporting our mutual goals of taking timely action on SIPs and eliminating the SIP backlog.

Pollutant-Specific Implementation Updates

Ozone, SO₂, PM_{2.5}, Pb

Now, on to updates on activities for specific pollutants.

2015 Ozone NAAQS Implementation Update

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- ♦ 52 areas initially designated nonattainment:
 - ♦ 51 areas (excluding San Antonio) effective August 3, 2018 (83 FR 25776; 6/04/18)
 - ♦ San Antonio, Texas area effective September 24, 2018 (83 FR 35136; 7/25/18)

Classification	Number of Areas	Attainment Deadline (years)	Attainment Date
Marginal	39	3	August 3, 2021* (2018-2020 DV)
Moderate	5	6	August 3, 2024
Serious	2	9	August 3, 2027
Severe-15	2	15	August 3, 2033
Extreme	2	20	August 3, 2038
Rural Transport (Marginal)	2	N/A	---
TOTAL	52		

* Sep 24, 2021 for San Antonio, TX area

- ♦ Columbus, OH area redesignated to attainment (84 FR 43508; 8/21/19)
- ♦ Initial SIP submittals (emissions inv./statements) due August 3, 2020



[NO UPDATES 9/09]

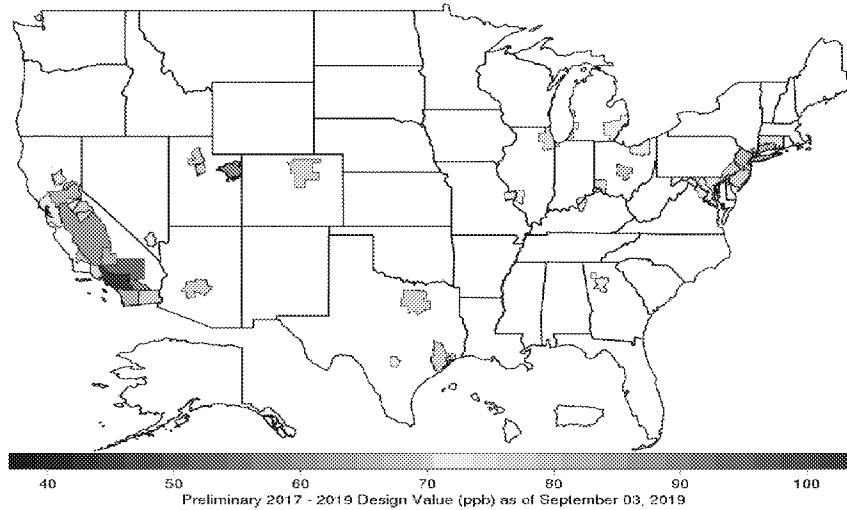
Starting first with Ozone, EPA designated 52 nonattainment areas in 2018.

The distribution of these areas in the classification tiers is shown here, with the majority of areas classified Marginal, with an upcoming attainment deadline in 2021 based on 2018-2020 air quality.

In 2018, only Columbus OH attained the standards, and the area was quickly redesignated to attainment effective August 21, 2019.

Also coming up is the deadline for initial SIPs covering emissions inventory and emissions statements. That deadline is August 3, 2020.

Preliminary 2017-2019 Design Values for 2015 Ozone Nonattainment Areas (70 ppb NAAQS)



[NEW SLIDE 9/09] – okayed by AQAD with Chet’s talking point on PRELIMINARY data – The 2019 data were pulled from AIRNow and thus are not official as we don’t use those data for official purposes, but for a preliminary snapshot we are using those data. Final numbers will come after all the official data is in AQS.

2015 Ozone NAAQS Implementation Update (cont.)

- ♦ Infrastructure SIP update
 - ♦ SIPs were due October 1, 2018
 - ♦ EPA has received 34 full submittals and 9 partial submittals
- ♦ Litigation on 2015 Ozone NAAQS SIP Requirements Rule
 - ♦ Final rule published December 6, 2018 (83 FR 62998)
 - ♦ Petitioners' brief filed July 22, 2019:
 - ♦ NNSR interprecursor trading
 - ♦ RFP requirements: milestone compliance demonstrations
 - ♦ RFP requirements: alternative baseline year
 - ♦ Early implemented contingency measures
 - ♦ EPA's reply brief due November 1, 2019; oral arguments timing TBD



[NO UPDATES 9/09]

iSIP update, these were due October of last year

34 full submittals, 9 partial submittals;

No litigation currently to force EPA to make findings that states failed to submit these SIPs.

However, there are still 13 submittals outstanding (50 states + DC + 5 territories = 56 total)

2015 SRR litigation: On February 4, 2019, Downwinders at Risk, Sierra Club, and National Parks Conservation Association filed a petition for review of the final 2015 ozone NAAQS SIP Requirements Rule in the D.C. Circuit

Petitioners' brief filed July 22, 2019:

Did EPA unlawfully and arbitrarily authorize interpollutant or interprecursor trading to satisfy offset requirements?

Did EPA unlawfully and arbitrarily allow ozone nonattainment areas to claim they have met their RFP milestones by showing only that they have implemented controls, without regard to whether actual emissions in the area went down by the required amount?

Did EPA unlawfully and arbitrarily claim discretion to allow states to choose their own RFP baseline year, thus allowing states to minimize or even avoid having to make the required reductions?

Did EPA unlawfully allow nonattainment areas to meet the contingency measure requirement by identifying measures that will already have been implemented at the time of a failure to meet a milestone or attain the standard?

2015 Ozone NAAQS Interstate Transport

- EPA is actively reviewing submitted 2015 ozone NAAQS transport SIPs
 - received 38 of 56 states/jurisdictions
 - finalized approval action on 2 state SIPs
 - proposed approval on an additional 4 SIPs
- Notice of Intent (NOI) to file mandatory duty deadline suit to make Findings of Failure to Submit outstanding interstate transport SIPs that were due October 1, 2018



[GSG provided 8/15] – also called “Good Neighbor” SIPs

Finishing up on 2015 ozone, we continue to work through challenging ozone transport issues, particularly where states are strongly linked to projected ongoing downwind nonattainment or maintenance problems.

Status: Received 38 good neighbor SIPs so far and have taken some action on 6 of them.

Some states are using the list of potential flexibilities in analytical approaches for developing a good neighbor SIP from EPA's March 2018 guidance.

Notices of Intent to file deadline suits for making findings (60-day NOIs)

EPA's deadline to determine whether a complete SIP had been submitted was April 1, 2019

Suits can be filed in September (Sierra Club 9/9, separately NY, CT, NJ naming MD, PA, VA 9/24)

We are discussing our schedule for making the required findings

We know some states are actively trying to get their submissions over the finish line, and we will try to take that into account in our planning (MS, AR, LA, MD, UT)

Submission plans less certain for HI, ME, RI, ST, VT, NM, PA, VA

Add'l Background:

On March 27, 2018, EPA provided projected air quality modeling results for ozone in 2023 identifying potential nonattainment and maintenance sites and projected upwind state contribution data.

States can use these data to develop their implementation plans to address the CAA's interstate transport requirements (assure emissions within their jurisdictions do not contribute significantly to nonattainment or interfere with maintenance in other states).

2008 Ozone NAAQS Implementation Update

- ♦ **Moderate area update**
 - ♦ Moderate area Determinations of Attainment by the Attainment Date (DAAD) published August 23, 2019 (84 FR 44238), effective September 23, 2019
 - ♦ DAAD rule establishes new SIP submittal and RACT implementation deadlines for newly-reclassified Serious areas
 - ♦ 1-year attainment date extension for Sheboygan County, WI to July 2019
 - ♦ Separate related actions for Denver, CO; Phoenix, AZ; Imperial County, CA; and Kern County, CA
- ♦ **2008 Ozone NAAQS Interstate Transport**
 - ♦ CSAPR Update and Closeout: Litigation is pending in the D.C. Circuit; oral arguments scheduled for September 20, 2018



[UPDATED 9/09]

There are 14 areas that were classified Moderate for the 2008 standards, and EPA has been actively evaluating progress toward attainment for these 14 areas.

EPA has finished taking our statutorily-required actions for 11 of these 14 areas, including one published in the FR last month. These actions have resulted in several areas being reclassified to Serious, which extends the attainment deadline to July 2021 but triggers additional SIP and permit program requirements. We have aligned the SIP revision deadlines with the August 2020 deadline for submitting the two-year SIPs meeting the 2015 ozone NAAQS requirements to give the affected states an opportunity to streamline their submission process for both standards.

There are upcoming actions remaining this year for Denver (reclassification), Phoenix (attained), and Imperial County CA.

Importantly, the Imperial County action involves an attainment determination based on international emissions transport under CAA section 179B.

This is a good time to mention that based on increasing interest in 179B, plan to release SIP demonstration guidance to air agencies for informal comment (very soon), and hopefully have a webinar during that comment period. Encourage states to provide feedback on draft 179B guidance once released.

Interstate ozone transport for 2008 ozone NAAQS (Beth P. 8/20/19)

Regional offices are moving forward to approve submitted 2008 transport SIPs where they can.

Reminder that there is pending litigation regarding the Cross State Air Pollution Rule (CSAPR) Close-Out (as well as the CSAPR Update) in the D.C. Circuit.

Litigation raises several fundamental questions about EPA's historic approach to and interpretation of the good neighbor provision. The Close-Out litigation is expedited, with briefings concluded and oral argument on September 20. We may have a decision from the court by the end of 2019.

BACKGROUND: Moderate area DAAD final rule (1st bullet)

Signed August 7, 2019

Determined that Baltimore, MD, and Mariposa, CA, attained the standards by the attainment date;

Granted a 1-year attainment date extension for the historic Sheboygan County, Wisconsin, which is now divided into two areas—the Inland Sheboygan County, WI, nonattainment area and the Shoreline Sheboygan County, WI, nonattainment area. The extension areas must attain the standard no later than July 20, 2019; and

Reclassified seven areas in 8 states—CA, CT, IL, IN, NJ, NY, TX and WI— as Serious. These areas must attain the standards by July 20, 2021.

2008 Serious area SIP revisions are due by August 3, 2020 (attainment demo & RFP, NNSR, RACT, etc.); intended to help

streamlining with initial SIP submittals for 2015 NAAQS (also due 8/03/20)

Final rule distinguishes (bifurcates) Serious area RACT:

"RACT measures tied to attainment" – implemented by August 3, 2020; needed for purposes of meeting RFP or attaining the NAAQS by the Serious attainment date (July 20, 2021)

"RACT measures not tied to attainment" – SIP revision due 18 months after final rule eff. date; potential additional measures that can be implemented by the July 20, 2021 Serious attainment date; could help areas attain 2008 and 2015 standards more expeditiously

Separate actions

Denver, CO -- proposal for mandatory reclassification to Serious (84 FR 41674; 8/15/19)

Phoenix, AZ – proposed Moderate DAAD (84 FR 27566; 6/13/19); final rule in progress

Imperial County, CA – Moderate SIP and 179B demo; proposal in progress

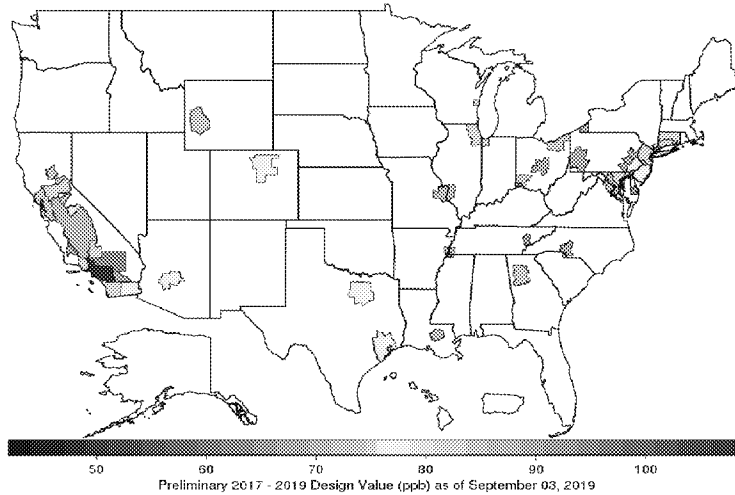
Eastern Kern County, CA – final rule for voluntary reclassification to Serious (83 FR 31334; 7/05/18)

BACKGROUND CSAPR:

In 2016, when EPA finalized the CSAPR Update, we indicated that, at that time, we could only conclude that the trading program was a partial remedy to states' good neighbor SIPs, absent further analysis.

In 2018, EPA finalized the CSAPR Close-Out which found, based on further analysis, that the CSAPR Update in fact fully addressed states' obligations for the 2008 ozone NAAQS.

Preliminary 2017-2019 Design Values for 2008 Ozone Nonattainment Areas (75 ppb NAAQS)



[NEW SLIDE 9/09] – okayed by AQAD with Chet’s talking point on PRELIMINARY data – The 2019 data were pulled from AIRNow and thus are not official as we don’t use those data for official purposes, but for a preliminary snapshot we are using those data. Final numbers will come after all the official data is in AQS.

1997 Ozone NAAQS Implementation Update

- ♦ The February 2018 *South Coast II* ruling upheld EPA's general authority to revoke a prior NAAQS with adequate antibacksliding protections ("controls") but reversed several key antibacksliding approaches for the revoked 1997 ozone NAAQS, including:
 - ✦ duty to reclassify areas upon failure to timely attain; and
 - ✦ "redesignation substitute" mechanisms to terminate antibacksliding controls
 - ✦ 2nd 10-year maintenance plans
- ♦ The ruling held that to remove antibacksliding requirements, areas that were designated nonattainment for the 1997 NAAQS at time of revocation needed to meet all redesignation requirements under CAA section 107(d)(3). Recent related proposed approvals include:
 - ✦ Houston-Galveston-Brazoria, TX area (84 FR 22093; 5/16/19)
 - ✦ Dallas-Fort Worth, TX area (84 FR 29471; 6/24/19)
- ♦ EPA provided "Resource Document" to assist states with preparing second 175A maintenance plans, including "limited maintenance plans." <https://www.epa.gov/ground-level-ozone-pollution/1997-ozone-national-ambient-air-quality-standards-naaqs-nonattainment>



[NO UPDATES 9/09]

We are still sorting out the adverse court decision on EPA's ozone implementation rule related to revoking the 1997 standards. In *South Coast II* the court reversed several key antibacksliding approaches for the revoked 1997 ozone NAAQS, including:

duty to reclassify areas upon failure to timely attain; and

"redesignation substitute" mechanisms to terminate antibacksliding controls

2nd 10-year maintenance plans

EPA's Region 6 office recently proposed a form of redesignation for the Houston and Dallas areas to "terminate antibacksliding obligations" for 1-hr and 1997 ozone NAAQS [Note: The *South Coast II* decision does not generally explicitly apply to the revoked 1-hr ozone NAAQS].

The Houston and Dallas proposals also took comment on:

whether EPA has the authority to change the area designation post-revocation; and

how we would reflect any changes in 40 CFR Part 81 where these areas are listed as being in nonattainment for the revoked 1-hour and 1997 NAAQS

We are reviewing comments and deciding a final rule approach (schedule TBD).

To address 2nd 10-year MAINTENANCE PLANS, EPA provided a "Resource Document" to assist states in developing those plans. Our Region 5 office recently proposed approval of second maintenance plans for multiple areas in IN and OH, many using the LMP approach (Jul-Aug 2019).

2010 SO₂ NAAQS Implementation Update

- **Approved attainment plans:** Currently, 15 of the SIPs for the initial 29 round 1 nonattainment areas have been approved. One area has received a Clean Data Determination (CDD). Continuing to review additional submitted plans. HQ is working with Regions and states on potential approvability issues.
- **Mandatory duty deadline lawsuit** on EPA's failure to make findings of failure to submit (FFS) SO₂ attainment plan SIPs was signed on September 9, 2019.
 - Suit filed in the U.S. District Court for the Northern District of California on June 14, 2018, and December 17, 2018
 - Covers Round 1 and Round 2 nonattainment areas
 - Section 113(g) proposed notice published in the FR on September 4, 2019. EPA is seeking public comment until October 4, 2019 on the consent decree with litigants under Section 113(g).
- **Interstate transport:** EPA continues to make good progress approving submitting SO₂ interstate transport SIPs and continues to work with states to submit approvable SIPs addressing the good neighbor provision.
- **Round 4 designations:** EPA must designate all remaining portions of the U.S. by Dec. 31, 2020. Targeting release of Round 4 Process Guidance Memo by the end of Summer 2019.



[UPDATED 9/09]

We are making progress on approving attainment plans for the Round 1 nonattainment areas.

CBD, Center for Environmental Health, and Sierra Club: FFS – We are looking at near term deadlines for making findings on outstanding submissions, and working closely with potentially affected states to submit complete SIPs. Fortunately, for most of the areas named in the suit, states have subsequently submitted the required SIP or a clean data determination has suspended the SIP obligation [Note 8/23: Anne Arundel/Baltimore Counties, MD; St. Clair Co MI in greatest jeopardy of a finding]

Interstate transport: see slide

Round 4 designations: see slide

SO₂ Round I areas without approved SIPs:

Steubenville, OH (AAPCA)
 Marshall, WV (AAPCA)
 Allegheny Co, PA
 Indiana, PA
 Beaver, PA
 Sullivan Co, TN (AAPCA)
 Detroit, MI
 Muskingum River, OH (AAPCA)
 Steubenville, OH-WV (AAPCA)
 Rhinelander, WI
 Jackson, MO
 Muscatine, IA
 Hayden, AZ (AAPCA)

Clean Data Area:
 Jefferson Co, MO

Progress on PM_{2.5} NAAQS Attainment

(as of August 2019)

	1997 PM _{2.5} (2005 Designations)	2006 PM _{2.5} (2009 Designations)	2012 PM _{2.5} (2015 Designations)
Initial Nonattainment Areas	39	32	9
Areas Redesignated to Attainment	35	18	1
Current Nonattainment Areas	4	14	8
Clean Data Determinations	3	10	3
Attainment Deadlines	Serious 11/2021	Serious 12/2019	Moderate 12/2021 Serious 12/2025



[NO UPDATES 9/10]

Still a few nonattainment areas and some upcoming deadlines for attaining.

Specifically, a deadline at the end of this year for 5 areas classified Serious for the 2006 standards.

BACKGROUND

1997 NAAQS Moderate: Libby MT (2011), Liberty-Clairton (2011), LA-South Coast (2015); 1997 Serious = SJV

2006 NAAQS Serious: Fairbanks, Provo, SLC, SJV, LA-South Coast (other 9 areas are Moderate)

2012 NAAQS all are Moderate

PM_{2.5} NAAQS Implementation: 2019 Actions

DATE	STATE	AREA	NAAQS	ACTION
5/28/2019	IL	St. Louis	1997	Final Redesignation
4/10/2019	UT	Provo	2006	Final Clean Data Determination
4/25/2019	AZ	West Central Pinal	2006	Proposed Clean Data Determ.
6/5/2019	UT	Salt Lake City	2006	Proposed Clean Data Determ.
4/12/2019	OH	Cleveland	2012	Final Redesignation
7/16/2019	PA	Lebanon County	2012	Proposed Redesignation
7/16/2019	PA	Delaware County	2012	Proposed Redesignation

- PM_{2.5} Precursor Demonstration Guidance issued in May 2019



[NO UPDATES 9/10]

EPA has taken a number of actions this year recognizing Clean Data and redesignating some areas.

Precursor Demo Guidance

We issued guidance on submitting optional precursor demonstrations to show that emissions of a particular precursor do “not contribute significantly to PM_{2.5} levels which exceed the standard in the area.”

If the EPA approves a precursor demonstration, the attainment plan and/or NNSR program may exclude the precursor from certain control requirements, depending on the type of demonstration provided.

A number of areas have already taken advantage of this flexibility and others are currently working on demonstrations. Eg. SJV is developing a precursor demo for ammonia; Allegheny plans to submit a demonstration that excludes NH₃ and VOC for its 2012 Moderate SIP; We approved Cleveland 2012 Moderate SIP- demonstrating out of NH₃ and VOC (final effective April 12, 2019); Bay Area may have had a demo approved for NNSR.

Lead (Pb) NAAQS Implementation Update

- Of the 22 areas designated nonattainment for the 2008 Pb NAAQS, 11 have been redesignated to attainment
- All areas have fulfilled attainment planning requirements
- Current focus:
 - Remaining redesignations
 - Monitor removal issues



[NO UPDATES 9/10]

Bullet 3: Focus is now on:

Redesignations

Resolving data issues and violations

Monitor removals

States have been requesting monitor removals for various reasons

Exploring current monitoring regulations and the potential need for additional guidance

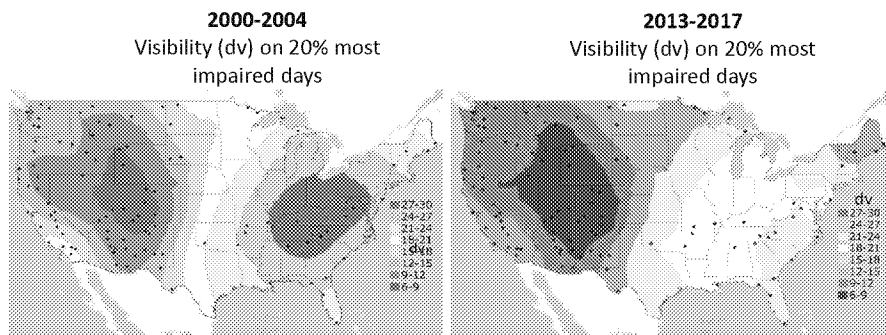
Exceptional Events Update

- EPA has concurred on 25 state demonstrations that were submitted since EPA revised the Exceptional Events Rule in September 2016
- We continue developing new guidance documents to help right-size demonstrations and facilitate the exceptional events process – Thank you for feedback on drafts!
 - **Stratospheric Ozone Intrusion Guidance – Released November 2018**
 - **Updated High Wind Dust Event Guidance – Released April 4, 2019**
 - **Clarification Memo on Data Modification – Released April 4, 2019**
 - **Prescribed Fire Guidance – Released August 9, 2019**
- EPA's exceptional events webpage provides key resources, including example demonstrations for Ozone and PM, and will continue to be updated as new materials become available

<https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events>



First Planning Period: Visibility is Improving



The National Park Service estimates that as of mid-2014, emission controls established under the first planning period led to approximately 500,000 tons/year of SO₂ and 300,000 tons/year of NO_x reductions. EPA estimates that visibility has improved significantly with the average visual range increased by 20 – 30 miles in Class I areas.



Regional Haze: Ongoing Work

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- * Resolve remaining first implementation period actions, following a SIP path where possible
- * Support states for the second and future implementation periods:
 - ✦ 2018 Technical Guidance (completed Dec. 2018)
 - ✦ Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (completed Aug. 2019)
 - ✦ 2028 Modeling (expected Summer 2019)
- * Key principles for the second planning period include:
 - ✦ Implementing the program with states in the lead (cooperative federalism)
 - ✦ Reducing state planning burdens and supporting states in complying with the CAA
 - ✦ Leveraging emission reductions achieved through other CAA programs that will further improve visibility in protected areas
 - ✦ Ensuring that we are on a path that enables compliance with the CAA and improved visibility in Class I areas



Key Similarities and Differences in Regional Haze: 1st and 2nd Implementation Periods

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Similarities: 1st period and 2nd period

- ◊ There are no bright lines in the rule for what is reasonable for states to include in their long-term strategies (LTS) for making reasonable progress
- ◊ EPA maintained the approach to SIP development (develop LTS, then project Reasonable Progress Goals (RPGs))

Differences: 1st period vs. 2nd period

- ◊ Focus in 2nd period is on reasonable progress, as opposed to 1st period focus on both BART and reasonable progress
- ◊ Visibility benefits are one of the five factors for BART identified in the first period, but are not one of the four statutory factors identified for reasonable progress
- ◊ Unlike the 2005 BART Guidelines Rule (which described how to quantify the five statutory factors for BART in the first period), the RHR does not dictate an analytical methodology for evaluating the reasonable progress factors and instead provides a flexible process for states to follow in developing approvable submissions
- ◊ Tracking metric uses anthropogenic impairment (vs. worst visibility)
- ◊ 51.308(f) is the applicable regulation, rather than 51.308(d) and 51.308(e)



Regional Haze Guidance: Purpose and Goals

- * Purpose: To help states develop approvable regional haze 2nd implementation period SIPs consistent with the Clean Air Act and the Regional Haze Rule
- * The goals of this Guidance Document include:
 - * Support states in developing SIPs for complying with the CAA visibility requirements
 - * Highlight the discretion and flexibilities states have within the statutory and regulatory requirements to develop regional haze SIPs
 - * Reduce state planning burdens
 - * Leverage emission reductions achieved through CAA and other programs that further improve visibility
- * The required content of these SIPs is specified in the Regional Haze Rule (RHR) (40 CFR 51.308(f)), which was revised in 2017



ADVANCE

www.epa.gov/advance

- A collaborative effort by EPA, states, tribes and local governments to achieve ongoing emission reductions in areas designated as attainment/maintenance for ozone and PM2.5 NAAQS.
- Our current partners are located in 38 areas in 21 states, and 9 of the 10 EPA Regions.
 - We encourage more partners to join the program.
- Management of the Advance program within OAQPS is shifting from the Outreach and Information Division to the Air Quality Policy Division.



[NEW SLIDE 9/10] – added by Rich D.

The program was established in 2012, and is a collaborative effort between EPA and government partners to encourage continued air quality improvement in ozone and PM2.5 areas designated as attainment. Areas update their plans each year. We're currently working with 38 areas around the country.

[Note: R2 is the one EPA Region that does not currently have any Advance areas.]

We continue to work through the EPA Regional Offices to reach out to areas that we consider to be good candidates for the program

Ozone attainment areas (CBSAs) with $dv > 65$ =

PM2.5 attainment areas (CBSAs) with annual $dv > 10$, or 24-hr $dv > 30$ =

Program management is moving between OAQPS Divisions this year in order to better integrate it with OAQPS NAAQS implementation efforts. The transition is more meaningful to us in OAQPS than it will be to our partners, who will continue to receive support from us in EPA HQ as well as their Regional Office contacts. We encourage new areas to join the program

Stakeholder Input and EPA Air Permitting Priorities

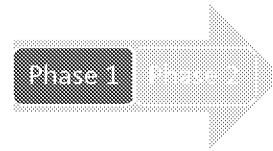
- ♦ Stakeholder Input

- ♦ Presidential Memorandum: "Streamlining Permitting and Reducing Regulatory Burdens for Domestic Manufacturing"
- ♦ E.O. 13777: "Enforcing the Regulatory Reform Agenda"
- ♦ General Themes
 - ♦ Permit Processing: Reduce timelines; allow more activities to proceed prior to receipt of permit
 - ♦ NSR Applicability: Streamline applicability determination process; provide flexibility and reduce number of projects subject to burdensome requirements
 - ♦ Control Technology: Simplify BACT determination process
 - ♦ Air Quality Impacts: Improve models; reduce conservatism; address ambient air issues
 - ♦ Emission Offsets: Provide more flexibility to expand offset availability

- ♦ Consistent with Stakeholder Input and Administration priorities, EPA is taking steps to clarify, revise, and streamline the NSR permitting program



Phase 1 NSR Actions



- Actual-to-Projected-Actual Applicability Test Memo
- Project Emissions Accounting (Guidance, Rule)
- Source Aggregation Guidance (Common Control, Adjacency)
- PM_{2.5} and Ozone SILs Guidance
- Project Aggregation Reconsideration Final Action
- Ambient Air Guidance
- Affordable Clean Energy Rule NSR Applicability Test
- Treatment of Biogenic CO₂ from Biomass Combustion



Actual-to-Projected-Actual Applicability Test Memo

- ♦ **Memorandum: “New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected-Actual Applicability Test in Determining Major Modification Applicability”**

- ♦ Signed by Administrator Pruitt 12/7/17
- ♦ Where a source projects an insignificant emissions increase, the level of actual emissions after the project governs applicability
- ♦ Projections may reflect the intent to actively manage post-project operations in order to prevent a significant emissions increase from occurring
- ♦ EPA will not second guess NSR applicability analyses that comply with the procedural requirements of the regulations



Project Emissions Accounting

- ♦ **Memorandum: “Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program”**

- ♦ Signed by Administrator Pruitt on 3/13/18 (83 FR 13745; 3/30/18)
- ♦ Memo Communicates EPA’s interpretation that the current NSR regulations provide that emissions decreases as well as increases are to be considered at Step 1 of the NSR applicability process, i.e., determining whether a project will result in a significant emissions increase

- ♦ **Proposed Rule (84 FR 39244, 8/9/19)**

- ♦ Proposing revisions to the NSR regulations to fully clarify that both increases and decreases resulting from a project are to be accounted for under Step 1 of the applicability process for all project categories
- ♦ Although the existing language in the NSR regulations supports this interpretation, rulemaking proposal is intended to clarify that and eliminate any uncertainty



Source Aggregation

* **Common Control – Meadowbrook Letter**

- * 4/30/18 letter to PA DEP clarified EPA's interpretation of "common control"
- * Letter explains EPA's view that control means the power or authority of one entity to dictate decisions of the other that could affect the applicability of, or compliance with, relevant air pollution regulatory requirements

* **Common Control – Ameresco Letter**

- * 10/16/18 letter to WI DNR further clarified EPA's interpretation of "common control"
- * In a situation where two entities each exercise some level of control of a single, limited aspect of otherwise separate operations, it is reasonable to conclude that they are separate sources
- * Shared activities should be allocated to a single source to avoid unworkable outcomes

* **Adjacency**

- * 2016 Rulemaking clarified "adjacent" for oil and gas operations (within ¼ mile + shared equipment)
- * **9/5/18: "Draft Guidance: Interpreting Adjacent for New Source Review and Title V Source Determinations in All Industries other than Oil and Gas"**
 - * EPA interprets "adjacent" to mean physical proximity; No bright line or fixed distance
 - * For operations not in physical proximity, the existence of functional interrelationship shall not be invoked to establish adjacency



PM_{2.5} and Ozone SILs Guidance

- ♦ **Guidance on Significant Impact Levels (SILs) for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program**

- ♦ Signed 4/17/18 (Peter Tsirigotis, OAQPS)
- ♦ Revised PM_{2.5} SILs/new ozone SILs:
 - ♦ Based on new technical approach and legal rationale
 - ♦ Streamline the air dispersion modeling process for PSD
- ♦ Guidance comprised of (1) Policy memorandum; (2) Technical document and (3) Legal support document
 - ♦ Where SILs are used, reference all three and include in any permit record
 - ♦ Not final agency action; not binding for industry, permitting authorities, or the public



Project Aggregation Reconsideration

- **Background:**
 - 2009 “Interpretive Rule” for Project Aggregation Established “substantially related” criterion for aggregating projects, and a 3-year rebuttable presumption against aggregating
 - NRDC petitioned for reconsideration and sued EPA on the 2009 Rule
 - EPA granted reconsideration and stayed the effectiveness of the 2009 Rule pending completion of the reconsideration or litigation
- **Final Action--Reconsideration Final Rule (83 FR 57324; 11/15/18):**
 - Retains the 2009 Rule without amending the rule text or the 2009 interpretation
 - Addresses notice and comment deficiencies and responds to other issues raised by NRDC
 - Lifts the stay of the 2009 Rule, making the rule effective



Ambient Air Policy

- **EPA defines “ambient air” as “that portion of the atmosphere, external to buildings, to which the general public has access” (40 CFR 50.1(e))**
 - EPA’s longstanding policy for implementing ambient air for PSD purposes was stated in a 1980 Costle letter, *“the atmosphere over land that is owned or controlled by the source and to which public access is precluded by a fence or other physical barriers”*
 - Subsequent guidance provided over the years by EPA to recommend how to apply 1980 policy statement for specific situations
- **Draft policy “Revised Policy on Exclusions from Ambient Air” issued 11/9/18**
 - Limited change to the way EPA applies regulatory definition of ambient air
 - Change replaces specific concept of a fence or other physical barriers with *measures, which may include physical barriers, that are effective in deterring or precluding access to the land by the general public*



ACE Rule EGU Hourly Emissions Test

- As part of the ACE proposed rule, EPA proposed to incorporate an hourly emissions test for NSR modification applicability for EGUs
- Three options proposed
- Hourly test would be a tool for states to implement the ACE rule; adoption would not be mandatory
- NSR rulemaking severed from 6/19 final ACE rule
- We're working on it

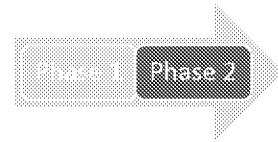


Treatment of Biogenic CO₂ in Air Permitting

- FY2017 and FY2019 Consolidated Appropriations Act outlines how EPA and other agencies are to establish consistent policies regarding the use of forest biomass for energy production including policies that reflect the carbon-neutrality of forest bioenergy
- 4/18 EPA policy statement: Forthcoming regulatory actions will treat biogenic CO₂ resulting from the combustion of biomass from managed forests at stationary sources for energy production as carbon neutral
- We're working on it



Phase 2 NSR Actions



- Tribal NSR Oil & Gas FIP
- NSR Error Corrections Rule
- Plantwide Applicability Limit Guidance
- NSR Actual-to-Projected-Actual Applicability Test Guidance
- Begin Actual Construction Guidance
- NSR Rule Reconsiderations
- E-Guidance Compendium
- Training



Phase 2 NSR Actions (cont.)

- ♦ Tribal NSR Oil & Gas FIP
 - ♦ Proposed rule Part I Registration Form streamlining amendment, (84 FR 33715, 7/15/2019); comment period closes 9/13/19
- ♦ NSR Error Corrections Rule
 - ♦ Stand-alone rule to correct errors in NSR regulation
- ♦ Plantwide Applicability Limit (PAL) Guidance
 - ♦ PAL regulations were established as part of 2002 NSR reform
 - ♦ Guidance would address elements of the PAL regulations that stakeholders have identified as sources of perceived risk/disincentive
- ♦ NSR Actual-to-Projected-Actual Applicability Test Guidance
 - ♦ Guidance would address certain elements of the 2002 NSR reform rule applicability regulations



Phase 2 NSR Actions (cont.)

- Begin Actual Construction Guidance
 - Sources cannot legally “begin actual construction” of a major source or major modification without first obtaining a major NSR permit
 - Guidance would explore potential flexibilities under the existing regulatory language to allow certain non-emitting activities to be undertaken prior to obtaining a permit
- NSR Rule Reconsiderations (in progress)
 - Reasonable Possibility Rule
 - Fugitive Emissions Rule
 - Ethanol Rule
- E-Guidance Compendium
 - Enhancement to current NSR website organizing current guidance documents in NSR index by topic
- Training



Other
Permitting
Actions and
Updates

MACT Once In Always In Policy
(Guidance, Rule)

Title V Petitions & Petitions
Process Rule

Title V Petitions: NSR Interface

Permitting Process Improvements



MACT Once In Always In Policy

- * **Memorandum: “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act” (“MM2A memo”)**
 - ◊ Signed by AA Bill Wehrum 1/25/18
 - ◊ Memo addresses when a major source subject to a maximum achievable control technology (MACT) standard, under section 112 of the Clean Air Act (CAA), may be reclassified as an area source and no longer subject to MACT requirements
 - ◊ Withdraws 1995 Seitz memo “Once In Always In” (OIAI) policy, which required major sources to limit potential to emit to below the major source threshold by the first compliance date to be treated as an area source
 - ◊ *Major source becomes area source at such time that source takes an enforceable limit on its potential to emit HAP below the major source thresholds (10 tons per year [tpy] of a single hazardous air pollutant or 25 tpy of any combination of HAP)*
- * **2019 MM2A Proposal (84 FR 36304, 7/26/2019)**
 - ◊ Addresses questions received after 2018 MM2A Memorandum issued
 - ◊ Reclassification process; Criteria for establishing effective PTE HAP limitations
 - ◊ Supersedes and replaces 2007 NPRM NESHAP: General Provision Amendments; addresses reclassification issues covered in 2007 NPRM
 - ◊ Timing for compliance with applicable NESHAP standards; Notification requirements; Recordkeeping requirements; Interaction with enforcement actions



Title V Petitions & Petitions Process Rulemaking

- Title V Petitions continue to be a substantial work load

	FY 2018	FY2019 (to date)
Petitions Received	11	9
Petitions Resolved	34	19

- Trends: Increased focus on wood pellet manufacturing

- **Title V Petitions Process Rulemaking**

- Proposed rule August 15, 2016 (81 FR 57822); Final expected Summer/Fall 2019
- Proposal included changes in 3 key areas: method of petition submittals, required content/format of petitions; administrative record requirements for states.



Title V Petitions – NSR Interface

- PacifiCorp Hunter Order (10/16/2017) – EPA will not look back at decisions made in NSR permitting process in the context of title V
 - Permitting agencies and EPA need not reevaluate- in the context of title V permitting, oversight, or petition responses- previously issued final preconstruction permits, especially those that have already been subject to public notice and comment and an opportunity for judicial review
 - Concerns with these final preconstruction permits should instead be handled under the authorities found in title I of the Act (e.g., enforcement actions under CAA § 113 or 167, state court appeals of preconstruction permits, or citizen enforcement actions under CAA § 304)
 - Where a final preconstruction permit has been issued, whether it is a major or minor NSR permit, the terms and conditions of that permit should be incorporated as "applicable requirements"
- Big River Steel Order (10/31/2017) – Applies same interpretation to fact set involving merged NSR/Title V program



Permitting Process Improvements

- **Increased use of electronic systems**
 - Central Data Exchange (CDX) for receipt of title V petitions
 - Electronic Permitting System (EPS)
 - Working with 35 state and local programs to develop system that will allow electronic submittal of state-issued NSR, title V, and other permits for EPA review
 - Also electronic processing of EPA-issued NSR and title V permits
 - Replacing and modernizing RACT/BACT/LAER Clearinghouse
- **EPA Permit Oversight Policy & Framework**
 - Goal is to develop a national approach to oversight of permits and permitting programs that is consistent and standardized
 - Would apply to the following EPA & state permit programs: NSR, Title V, NPDES, Underground Injection Control (UIC), and RCRA



NAAQS Implementation Milestones (August 2019)

51

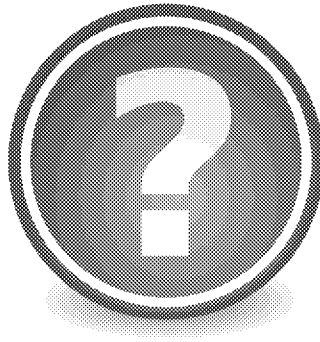
Pollutant	Final NAAQS Signature	Nonattainment Designations Effective	Infrastructure SIP Due	Attainment Plans Due	Attainment Date
PM _{2.5} (2006)	Oct 2006	Dec 2009	Oct 2009	Dec 2014	Dec 2015 (Moderate) Dec 2019 (Serious)
Pb (2008)	Oct 2008	Dec 2010-2011	Oct 2011	June 2012-2013	Dec 2015-2019
PM _{2.5} (2012)	Dec 2012	Apr 2015	Dec 2015	Oct 2015 (Moderate)	Dec 2021 (Moderate) Dec 2025 (Serious)
NO _x (2010) (primary)	Jan 2010	Feb 2012	Jan 2013	N/A	N/A
SO ₂ (2010) (primary)	June 2010	Oct 2013, Sept 2016, Apr 2018 (early 2021)	June 2013	Apr 2015, Mar 2018, Oct 2019 (mid 2022)	Oct 2018, Sept 2021, Apr 2023 (early 2026)
Ozone (2005)	Mar 2008	July 2012	Mar 2011	July 2015-2016*	July 2021-2032
Ozone (2015)	Oct 2015	Aug 3, 2018 (Sep 24, 2018 for San Antonio, TX)	Oct 2018	Aug 2021-2022	Aug 2021-2038

* January 2017 for areas reclassified from Marginal to Moderate. August 2020 for areas reclassified from Moderate to Serious.
** for areas classified from Serious to Extreme



As has become custom, we have updated our table of implementation milestones as a reference.

Questions and Comments



Message

From: Rao, Raj [Rao.Raj@epa.gov]
Sent: 7/23/2018 1:58:06 PM
To: Mathias, Scott [Mathias.Scott@epa.gov]; Long, Pam [Long.Pam@epa.gov]; Brachtl, Megan [Brachtl.Megan@epa.gov]; Ling, Michael [Ling.Michael@epa.gov]
CC: Montanez, Jessica [Montanez.Jessica@epa.gov]; Vetter, Cheryl [Vetter.Cheryl@epa.gov]
Subject: RE: ACTION ITEM - Spring 2018 Regulatory Agenda - 3 Action Identified for Science Advisory Board (SAB) Consideration - Due to Pam Noon 7/23

Scott, this looks fine to me with a tweak of the description (to be worked out)– also copying Jessica (for PEA rule) and Jessica/Cheryl -for biomass

Raj Rao, P.E.
Group Leader, New Source Review Group,
Air Quality Policy Division,
Office of Air Quality Planning and Standards (MD-C504-03)
US Environmental Protection Agency
109 TW Alexander Drive
Research Triangle Park, NC 27709
919-541-5344
919-541-5509 - Fax

Note: Positions or views expressed here do not represent official EPA policy. Interagency Deliberative and Confidential

From: Mathias, Scott
Sent: Monday, July 23, 2018 9:50 AM
To: Long, Pam <Long.Pam@epa.gov>; Brachtl, Megan <Brachtl.Megan@epa.gov>; Ling, Michael <Ling.Michael@epa.gov>; Rao, Raj <Rao.Raj@epa.gov>
Subject: RE: ACTION ITEM - Spring 2018 Regulatory Agenda - 3 Action Identified for Science Advisory Board (SAB) Consideration - Due to Pam Noon 7/23

I see now how this is a bit amorphous. I suggest the following entries in the template. I'm copying Michael and Raj also. Let me know what you think.

Description of Planned EPA Tier 1 or Tier 2 Action

1. Name of action:

2. RIN Number:

3. EPA Office originating action:

4. Brief description of action and statement of need for the action:

This is a placeholder for one or more potential proposed rulemakings to address NAAQS implementation-related policies determined by the Administrator as necessary to fully realize the benefits of strategies to streamline and reduce burden, and in response to adverse court decisions. This may include proposals for regulatory or policy changes related to implementation of the ozone and SO₂ NAAQS, PSD permitting, and to EPA's start-up, shutdown, and malfunction (SSM) policy.

5. Timetable:

To be determined.

6. Scientific products that will inform the action and plans for peer review:

6(a). Describe the scientific work products that have been or will be developed to inform decisions regarding the planned action.

Not yet identified.

6(b). For each work product, describe the approach the agency is taking to develop the needed science or analysis (e.g., any inter-agency collaboration, workshops to inform the analysis).

6(c). For each work product, identify whether the action relies on science that meets the EPA Peer Review Handbook definition of "an influential scientific or technical work product" that "has a major impact, involves precedential, novel, and/or controversial issues, or the Agency has a legal and/or statutory obligation to conduct a peer review?"

6(d). Peer review:

Scott Mathias | Associate Director, Air Quality Policy Division | U.S. EPA, RTP, NC 27711 | 919.541.5310

From: Long, Pam

Sent: Monday, July 23, 2018 9:07 AM

To: Brachtl, Megan <Brachtl.Megan@epa.gov>

Cc: Mathias, Scott <Mathias.Scott@epa.gov>

Subject: RE: ACTION ITEM - Spring 2018 Regulatory Agenda - 3 Action Identified for Science Advisory Board (SAB)
Consideration - Due to Pam Noon 7/23

Megan and Scott – this is how the abstract reads. Not sure if it helps.

This action is intended to provide regulatory relief with respect to National Ambient Air Quality Standards (NAAQS) implementation consistent with the statutory provisions of the Clean Air Act. Among other things, the action will draw upon the recommendations identified in the agency's August 2017 *Report to Congress on Administrative Options to Enable States to Enter into Cooperative Agreements to Provide Regulatory Relief for Implementing Ozone Standards* and the October 2017 *Final Report on Review of Agency Actions that Potentially Burden the Safe, Efficient Development of Domestic Energy Resources Under Executive Order 13783*.

From: Brachtl, Megan
Sent: Monday, July 23, 2018 9:01 AM
To: Long, Pam <Long.Pam@epa.gov>; Montanez, Jessica <Montanez.Jessica@epa.gov>
Cc: Rao, Raj <Rao.Raj@epa.gov>; Vetter, Cheryl <Vetter.Cheryl@epa.gov>; Mathias, Scott <Mathias.Scott@epa.gov>; Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>
Subject: RE: ACTION ITEM - Spring 2018 Regulatory Agenda - 3 Action Identified for Science Advisory Board (SAB) Consideration - Due to Pam Noon 7/23

Thanks, Pam. Scott – is that generic implementation rule entry related to 2015 ozone? I'll assume yes unless I hear otherwise so I can delegate this request to the appropriate staff person.

Megan

Megan V. Brachtl, Group Leader
State and Local Programs Group
Office of Air Quality Planning and Standards
U.S. Environmental Protection Agency
(919) 541-2648
brachtl.megan@epa.gov

From: Long, Pam
Sent: Monday, July 23, 2018 8:33 AM
To: Montanez, Jessica <Montanez.Jessica@epa.gov>; Brachtl, Megan <Brachtl.Megan@epa.gov>
Cc: Rao, Raj <Rao.Raj@epa.gov>; Vetter, Cheryl <Vetter.Cheryl@epa.gov>; Mathias, Scott <Mathias.Scott@epa.gov>; Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>
Subject: ACTION ITEM - Spring 2018 Regulatory Agenda - 3 Action Identified for Science Advisory Board (SAB) Consideration - Due to Pam Noon 7/23
Importance: High

See below. These three actions have been identified for SAB consideration. Mike K. is requesting the template in the word file attached be submitted to him by COB Thursday so I am asking for you to send them to me **NLT noon Thursday 7/26** to compile and have IO mgmt. to review and approval before I send them down to him.

Megan – action under 2060-AU10 was a last minute add for the Spring 2018 agenda that was to capture any implementation rules that could possibly pop up before the Fall 2018 agenda – “catch all - generic.” It will also be in the Fall 2018 agenda under longterm.

Any questions, let me know and I will try to find the answers. Thanks.

From: Mathias, Scott
Sent: Monday, July 23, 2018 8:16 AM
To: Long, Pam <Long.Pam@epa.gov>
Subject: FW: Spring 2018 Semiannual Agenda available

Pam,

Not sure why Mike did not address to you also. Please sort through and figure out who needs to address each of the three entries below. We can discuss at the 10 am staff meeting.

<u>RIN</u>	<u>Agency</u>	<u>Agenda Stage of Rulemaking</u>	<u>Title</u>	<u>Publication</u>	<u>New</u>	<u>Tier</u>
<u>2060-AT89</u>	EPA/OAR	Proposed Rule Stage	Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Project Emissions Accounting	Spring 2018	Yes	2
<u>2060-AU03</u>	EPA/OAR	Long-Term Actions	Treatment of Biogenic CO2 Emissions Under the Clean Air Act Permitting Programs	Spring 2018	Yes	1
<u>2060-AU10</u>	EPA/OAR	Long-Term Actions	General National Ambient Air Quality Standards Implementation Update Rule	Spring 2018	Yes	2

Scott Mathias | Associate Director, Air Quality Policy Division | U.S. EPA, RTP, NC 27711 | 919.541.5310

From: Koerber, Mike

Sent: Monday, July 23, 2018 7:50 AM

To: Mathias, Scott <Mathias.Scott@epa.gov>; Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>; Culligan, Kevin <Culligan.Kevin@epa.gov>; Eck, Janet <Eck.Janet@epa.gov>; Cozzie, David <Cozzie.David@epa.gov>; Wood, Anna <Wood.Anna@epa.gov>

Cc: South, Peter <South.Peter@epa.gov>; Henigin, Mary <Henigin.Mary@epa.gov>

Subject: FW: Spring 2018 Semiannual Agenda available

Please complete templates for the actions in your Division and return to me by COB Thursday.

Mike

From: Hockstad, Leif

Sent: Friday, July 20, 2018 4:55 PM

To: Tsirigotis, Peter <Tsirigotis.Peter@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Cook, Leila <cook.leila@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Dunham, Sarah <Dunham.Sarah@epa.gov>; Krieger, Jackie <Krieger.Jackie@epa.gov>

Cc: Mazza, Carl <Mazza.Carl@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>

Subject: FW: Spring 2018 Semiannual Agenda available

All –

There are nine OAR actions in the Spring 2018 regulatory agenda have been identified for SAB consideration (highlighted below). Our next steps are to complete the attached template to provide summary information on each action to the SAB. If you all could work with your staff to complete them in the most appropriate manner that would be a great help.

We have had delays in getting this request out and I apologize in advance for a requested quick turnaround. Please send me your completed templates by COB Monday July 30. At that point we can provide the completed templates to the OAR IO for review and then send them along to the EPA staff office for the SAB.

Thanks,
Leif

Leif Hockstad
Office of Air and Radiation - OAPPS
U.S. Environmental Protection Agency
Phone: 202 343 9432
hockstad.leif@epa.gov

From: Carpenter, Thomas
Sent: Monday, June 11, 2018 7:14 PM
To: Shoaff, John <Shoaff.John@epa.gov>; Hockstad, Leif <Hockstad.Leif@epa.gov>; Evalenko, Sandy <Evalenko.Sandy@epa.gov>; Sinks, Tom <Sinks.Tom@epa.gov>
Cc: Muellerleile, Caryn <Muellerleile.Caryn@epa.gov>; Chun, Melissa <Chun.Melissa@epa.gov>; Cogliano, Gerain <Cogliano.Gerain@epa.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>; Johnston, Khanna <Johnston.Khanna@epa.gov>; Lamson, Amy <Lamson.Amy@epa.gov>
Subject: FW: Spring 2018 Semiannual Agenda available

Greetings,

The Office of Policy identified 12 actions to be considered by the SAB in their evaluation of the supporting science for planned actions based on the protocols developed by EPA. The 12 actions that need a completed template and responsible program office are listed in the table below and attached spreadsheet.

On March 31, 2015 the Office of Policy distributed the Process and Best Practices for EPA Engagement with the Science Advisory Board in SAB Screening of the Scientific Basis for Major Agency Planned Actions to program offices as an instructional guide. It provides the best practices for developing and sharing information with the SAB for the this process. I have attached a PDF of that document for your convenience. Also attached is a word version of the annotated template for you to complete.

Several of the actions are related to previous reviews conducted by the SAB or are associated with actions that have been identified as actions the SAB find merits review by the Board.

Please provide your Office's completed templates to me by July 2, 2018. The SAB Staff Office will convene the Work Group after materials are provided.

Please call if you have any questions.

Best,
Tom

Thomas Carpenter
Designated Federal Officer / Sr. Biologist
US EPA Science Advisory Board, MC 1400R
1200 Pennsylvania Avenue, NW
Washington DC 20460
ph 202 564 4885 Fax 202 565 2098

<u>RIN</u>	<u>Agency</u>	<u>Agenda Stage of Rulemaking</u>	<u>Title</u>	<u>Publication</u>	<u>New</u>	<u>Tier</u>
<u>2060-AT85</u>	EPA/OAR	Proposed Rule Stage	Miscellaneous Organic Chemical Manufacturing and Miscellaneous Coating Manufacturing Residual Risk and Technology Reviews	Spring 2018	Yes	2
<u>2060-AT86</u>	EPA/OAR	Proposed Rule Stage	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) RTR	Spring 2018	Yes	2
<u>2060-AT89</u>	EPA/OAR	Proposed Rule Stage	Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Project Emissions Accounting	Spring 2018	Yes	2
<u>2060-AT90</u>	EPA/OAR	Proposed Rule Stage	Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review	Spring 2018	Yes	1
<u>2060-AT93</u>	EPA/OAR	Proposed Rule Stage	Renewable Fuel Volume Standards for 2019 and Biomass Based Diesel Volume (BBD) for 2020	Spring 2018	Yes	1
<u>2060-AT99</u>	EPA/OAR	Proposed Rule Stage	Mercury and Air Toxics Standards for Power Plants Residual Risk and Technology Review and Cost Review	Spring 2018	Yes	1
<u>2060-AU09</u>	EPA/OAR	Proposed Rule Stage	Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy	Spring 2018	Yes	1
<u>2080-AA14</u>	EPA/ORD	Proposed Rule Stage	Strengthening Transparency in Regulatory Science	Spring 2018	Yes	1
<u>2040-AF81</u>	EPA/OW	Long-Term Actions	Updates to Wet Weather Treatment Regulations for POTWs	Spring 2018	Yes	2
<u>2040-AF83</u>	EPA/OW	Long-Term Actions	Clean Water Act Section 404 Assumption Update Regulation	Spring 2018	Yes	2
<u>2060-AU03</u>	EPA/OAR	Long-Term Actions	Treatment of Biogenic CO2 Emissions Under the Clean Air Act Permitting Programs	Spring 2018	Yes	1
<u>2060-AU10</u>	EPA/OAR	Long-Term Actions	General National Ambient Air Quality Standards Implementation Update Rule	Spring 2018	Yes	2

From: Muellerleile, Caryn

Sent: Friday, June 01, 2018 11:56 AM

To: Carpenter, Thomas <Carpenter.Thomas@epa.gov>

Cc: Nickerson, William <Nickerson.William@epa.gov>

Subject: RE: Spring 2018 Semiannual Agenda available

Hello Tom,

Attached is EPA's Spring 2018 Agenda with May 2018 tier levels confirmed and/or revised in red in the "tier" column. All tier levels have been approved through the OP AA as of this time.

Many thanks,

Caryn Muellerleile
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1200 Pennsylvania Ave NW (1803A)
Washington, DC 20460
(202) 564-2855
muellerleile.caryn@epa.gov

From: Muellerleile, Caryn
Sent: Wednesday, May 16, 2018 8:36 AM
To: Carpenter, Thomas <Carpenter.Thomas@epa.gov>
Cc: Shoaff, John <Shoaff.John@epa.gov>; William Nickerson (<Nickerson.William@epa.gov>
<Nickerson.William@epa.gov>
Subject: RE: Spring 2018 Semiannual Agenda available

Hi Tom,

I do not know if you have distributed the list of spring 2018 to the SAB yet, but there was one error last week that has since been corrected in the online publication. Attached is the revised list (excludes 2060-AT95).

My apologies for the confusion.

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From: Muellerleile, Caryn
Sent: Thursday, May 10, 2018 10:54 AM
To: RSC Core <RSC_Core@epa.gov>; RSC Regions Core <RSC_Regions_Core@epa.gov>; Carpenter, Thomas <Carpenter.Thomas@epa.gov>
Cc: OP-ORPM-Everyone <OPORPMEveryone@epa.gov>; Germann, Sandy <Germann.Sandy@epa.gov>; Shoaff, John <Shoaff.John@epa.gov>; Griffiths, Charles <Griffiths.Charles@epa.gov>; Morgan, Cynthia <Morgan.Cynthia@epa.gov>
Subject: Spring 2018 Semiannual Agenda available

The spring 2018 agenda of regulatory and deregulatory actions and regulatory plan has been released by OMB. I've included several links of interest below, but most importantly, you will want to look at the compiled Excel spreadsheet

(attached) since it includes all of EPA's actions in one location, in addition to some other key information, such as the tier level and whether the action is new. All actions that are not "inactive" or "pending" include a live hyperlink to view the spring agenda entry – please query this list before contacting me about where an action is available online. I also highly encourage you to use the "Advanced Search" function at reginfo.gov to seek certain attributes of EPA's entries, such as government levels impacted or small businesses.

EPA's May tiering is not yet completed so the attached spreadsheet contains proposed tier levels.

Online Agenda:

<https://www.reginfo.gov/public/do/eAgendaMain>

Regulatory Reform: Two-for-One and Regulatory Cost Caps

<https://www.reginfo.gov/public/do/eAgendaEO13771>

Press:

<https://www.epa.gov/newsreleases/administrator-pruitt-advances-president-trumps-regulatory-reform-agenda-smart-sectors>

<https://www.whitehouse.gov/articles/advancing-responsible-regulatory-reform-deregulatory-agenda/>

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Message

From: Nancy Kruger [nkruger@4cleanair.org]
Sent: 4/16/2018 7:00:45 PM
To: Mathias, Scott [Mathias.Scott@epa.gov]
Subject: draft CP agenda & question about O3 designations
Attachments: CP_agenda-2018-04April.doc; epa2018_0631.pdf

Hi Scott,

- 1) Attached is the draft agenda for the April 24, 2018 CP call. I'd like to add the memorandum issued by the President last week so we can get a briefing on what's in it, its implications and any plans for implementing it. Is it OK with you if we make it a separate agenda item and put it first? Also, who should I list for presenting on that?
- 2) On a separate issue, I see in Anna's slides (attached) from the AAPCA meeting, on p. 49, that the effective date for the 2015 ozone designations (to be final by the end of this month, but for San Antonio) is listed as mid-October. Is that a typo or is mid-October when EPA actually plans for the 2015 ozone designations to take effect?

Thanks,
-Nancy

Nancy Kruger
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NAAQS and Other Implementation Updates

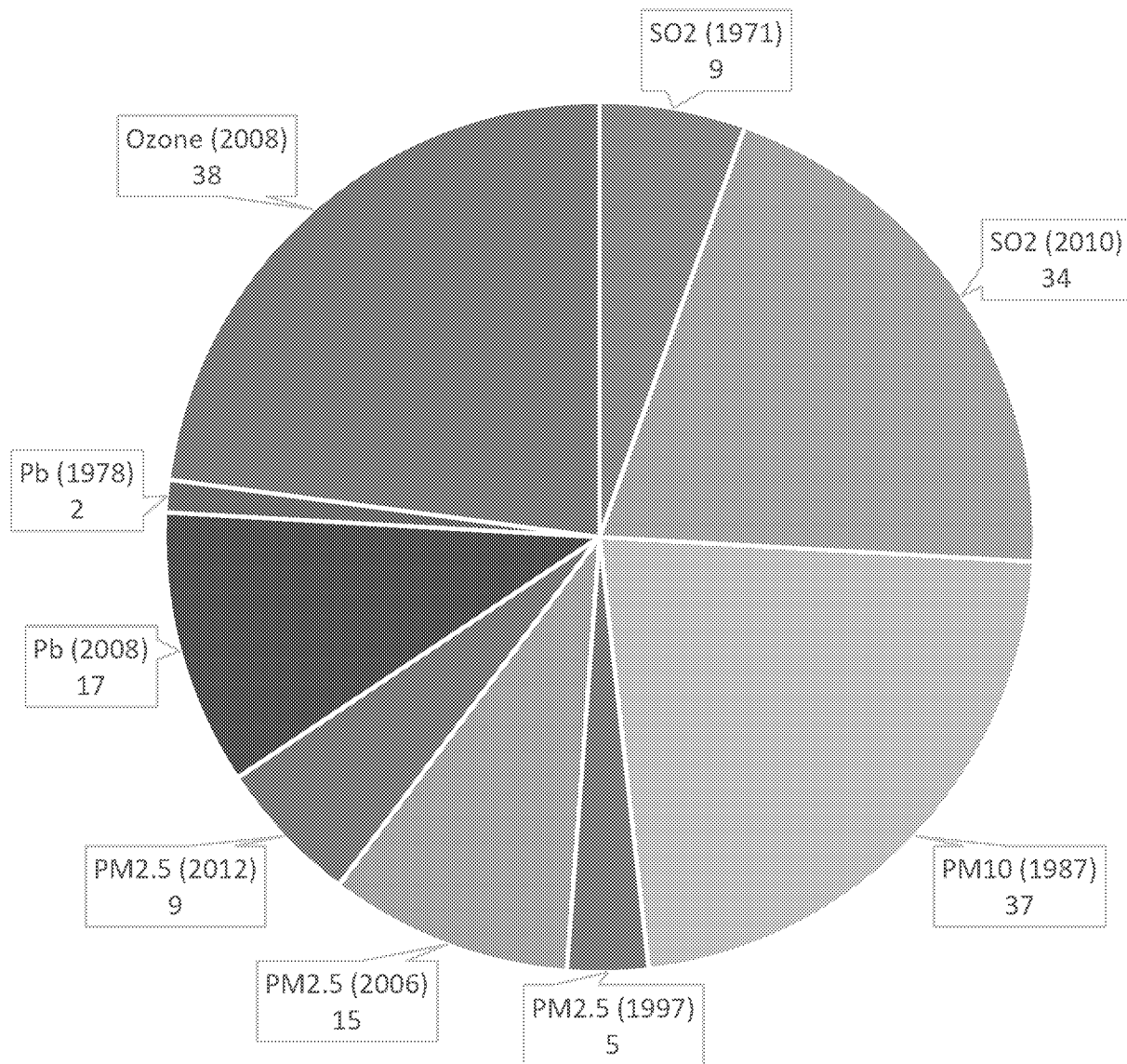
ANNA MARIE WOOD
DIRECTOR, AIR QUALITY POLICY DIVISION
OFFICE OF AIR QUALITY PLANNING AND STANDARDS
AAPCA SPRING MEETING, APRIL 5, 2018

OVERVIEW

- EPA's Clean Air Priority Goal: Reduce Number of Nonattainment Areas
- NAAQS Implementation Updates
 - Ozone
 - Sulfur Dioxide (SO₂)
- Exceptional Events
- Regional Haze
- NSR and Title V Permitting Updates
- SIP Processing Improvements, SPeCS and LEAN



Nonattainment Areas for Non-revoked NAAQS as of October 1, 2017



EPA Priority Goal: Reduce Number of Nonattainment Areas

- Work with states to prioritize redesignation submissions.
- Ensure states have necessary rules, guidance, and tools.
- Improve the efficiency and effectiveness of the SIP/TIP process, including EPA's review process, to maximize timely processing of requested SIP/TIP actions.
- Take federal oversight actions, where necessary.

Approving state requests to redesignate nonattainment areas depends on states meeting the minimum Clean Air Act requirements, which include:

- A demonstration that the area has air quality that is attaining the NAAQS;
- Establishing that pollution reductions are due to implementing permanent and enforceable measures;
- A 10-year maintenance plan that includes contingency measures to be triggered in the event of a re-violation of the NAAQS; and,
- Satisfying any other applicable and outstanding attainment planning and emissions control requirements.

EPA's Clean Air Priority Goal FY2018-2022: Reduce Number of Nonattainment Areas

FISCAL YEAR	GOAL (from 166 areas)*	ACTUAL (thru FY18 Q2)
FY2018	155	163
FY2019	146	
FY2020	144	
FY2021	140	
FY2022	101	

* The baseline of 166 is the number of areas designated nonattainment for non-revoked standards as of 10/1/2017 (start of 1st quarter of FY 2018).



2008 Ozone NAAQS: Implementation

- **2008 Ozone NAAQS Key implementation dates for nonattainment areas:**
 - Emissions inventories, emissions statement rules and RACT SIPs were due July 2014
 - Attainment plans and demonstrations were due July 2015 (Moderate) or July 2016 (Serious and above)
 - Marginal area attainment date July 20, 2015 (attainment determined by 2012-2014 air quality data)
 - Moderate area attainment date July 20, 2018 (2015-2017 air quality data)
- EPA to make determinations of whether Moderate nonattainment areas attained the 2008 standard by the July 20, 2018, attainment date.
 - Final action must be completed by January 20, 2019.



2008 Ozone NAAQS: Findings of Failure to Submit

- On January 13, 2017, in response to a complaint filed by environmental petitioners, the EPA found that 15 states and the District of Columbia failed to submit certain SIP revisions required under the 2008 ozone NAAQS (82 FR 9158; February 3, 2017; effective March 6, 2017)
 - EPA also entered into a Consent Decree with the petitioners on January 19, 2017, which sets deadlines for EPA to complete final actions on SIP submittals by various dates ranging from June 2017 to July 2018
- On November 29, 2017, also in response to a complaint filed by environmental petitioners, the EPA found that 3 states failed to submit various SIP submittals required for 2008 ozone NAAQS nonattainment areas reclassified to Moderate in 2016 (82 FR 58118; December 11, 2017; effective January 10, 2018)
 - These findings of failure to submit served as formal notice to air agencies and established deadlines by which they either must submit complete SIP revisions or become subject to mandatory sanctions



2008 Ozone NAAQS Implementation: Litigation

- **2008 Ozone NAAQS State Implementation Plan (SIP) Requirements Rule (80 FR 12264; March 6, 2015)**
 - Provides rules and guidance on nearly all aspects of the attainment planning requirements
 - Revoked the 1997 NAAQS effective April 6, 2015, and established anti-backsliding requirements

South Coast Air Quality Management District v. EPA (2018)

- South Coast AQMD and env. petitioners (Sierra Club *et al.*) challenged various elements of the 2008 Ozone NAAQS SIP Requirements Rule (SRR)
- The D.C Circuit issued its decision on February 16, 2018, upholding about half of the challenged elements and vacating several flexibilities in the SRR



2008 Ozone NAAQS Implementation: Litigation (cont.)

- ***South Coast Air Quality Management District v. EPA (2018): Key Decisions Include:***
 - ***UPHELD:***
 - RFP requirements including default 2011 baseline, one-time fulfillment of 15% VOC reduction, in-area restriction
 - RACT area-wide emissions averaging
 - EPA's authority to revoke a prior NAAQS with adequate anti-backsliding requirements
 - ***VACATED:***
 - Anti-backsliding approaches for bump-ups, "redesignation substitutes," and transportation conformity
 - RFP alternative baseline years
 - 1997 NAAQS maintenance area flexibilities (maintenance plans, transportation conformity)
- EPA is assessing options for addressing Court decision and implications for implementation of the 2008 and 2015 NAAQS



2015 Ozone NAAQS: Implementation-Related Rulemakings

- **Proposed Rule: Implementation of the 2015 NAAQS for Ozone: Nonattainment Area Classifications and SIP Requirements** published for public comment November 17, 2016 (81 FR 81276)
- **Final: 2015 Ozone NAAQS Classifications Rule** published March 9, 2018 (83 FR 10376)
 - Final nonattainment area classification thresholds based on “percent-above-the-standard” (PATs) methodology
 - Final maximum attainment dates associated with each nonattainment area classification
- **Final: 2015 Ozone NAAQS State Implementation Plan (SIP) Requirements Rule**
 - To be issued after remaining area designations (later this spring)
 - EPA will consider *South Coast v. EPA* (2018) decision in its final approach



2015 Ozone NAAQS Area Designations

- The statutory deadline for designations was October 1, 2017
- **On November 6, 2017, the EPA issued final designations of attainment/unclassifiable for about 85% of the counties in the United States**
 - This included 2,646 counties, two separate areas of Indian Country areas and five territories
 - It also included a designation of unclassifiable for three counties in the state of Washington due to insufficient monitoring data to calculate a 3-year ozone design value
 - These final designations took effect on January 16, 2018, 60 days after the notice was published in the Federal Register

2015 Ozone NAAQS Designations (cont.)

- **On December 22, 2017**, EPA notified states and tribes concerning any intended modifications to their designation recommendations (“120-day letters”) for the remaining undesignated areas of the U.S.
 - EPA proposed 54 intended nonattainment areas and 3 unclassifiable areas, as well as additional attainment/unclassifiable areas and deferred taking action on the 8 counties in the San Antonio, TX metropolitan statistical area
 - Notification of availability and public comment period was published on January 5, 2018 (83 FR 651); comment period ended February 5, 2018
 - EPA requested States and Tribes to provide any final input by February 28, 2018
 - EPA is under court order to promulgate final ozone area designations for these areas no later than April 30, 2018



Progress on Ozone NAAQS Attainment

(as of March 2018)

	1997 NAAQS (2004 Designations)	2008 NAAQS (2012 Designations)
Initial Nonattainment Areas	115	46
Areas Redesignated to Attainment	80 (prior to revocation)	8
Current Nonattainment Areas	35	38
Clean Data Determinations	26	18*
Redesignation Substitutes	2	n/a
Reclassifications to Higher Classification	0**	13

*Includes 15 Marginal area determinations of attainment by the attainment date and 3 Moderate area clean data determinations.

**Obligation to reclassify may be affected by South Coast II decision.



2010 SO₂ NAAQS Area Designations

- EPA revised **Primary NAAQS for Sulfur Dioxide (SO₂) standard** on June 3, 2010 to 75 ppb/1-hour (75 FR 35520)
- EPA is completing area designations in four separate Rounds:
 - Round 1 – July 25, 2013: EPA designated 29 areas as nonattainment (effective September 12, 2013)
 - SIP submittal date: April 4, 2015
 - Attainment date: October 4, 2018
 - FFS issued: April 18, 2016
 - Number of areas issued FFS: 16 areas in 11 states
 - Mandatory sanctions (can be avoided by submitting a complete SIP)
 - First sanction: 2:1 Emissions Offset for NNSR: October 18, 2017
 - Second sanction: Highway funds: April 18, 2018
 - FIP obligation: April 18, 2018 (24 months after effective date of FFS)
 - Currently, EPA remains subject to FIP obligations for 13 of the 16 FFS areas

2010 SO₂ NAAQS Area Designations (con't)

- Round 2 – July and December 2016: EPA finalized designations for 65 areas including 7 nonattainment areas, 41 unclassifiable/attainment areas, and 17 unclassifiable areas
 - Number of nonattainment areas designated on **July 12, 2016: 4**
 - Effective date of designations: **September 12, 2016**
 - SIP submittal date: **March 12, 2018**
 - Attainment date: **September 12, 2021**
 - Number of nonattainment areas designated on **December 13, 2016: 3**
 - Effective date of designations: **January 12, 2017**
 - SIP submittal date **July 12, 2018**
 - Attainment date: **January 12, 2022**



2010 SO₂ NAAQS Area Designations (con't)

- Round 3 – December 21, 2017: EPA designated all remaining areas of the country except Round 4 areas
 - Included 6 nonattainment areas, 23 unclassifiable areas, and the remainder of the country in all states, territories, and tribes designated attainment/unclassifiable (except Round 4 areas)
 - The effective date of the designations is April 9, 2018
 - SIP submittal date: October 9, 2019
 - Attainment date: April 9, 2023
 - EPA is issuing a supplemental notice before April 9, 2018, to account for new information regarding 2017 air quality, as applicable

- Round 4 – by December 30, 2020: EPA will designate approximately 50 remaining areas by the consent decree deadline
 - Monitoring is underway in states that timely sited monitors consistent with the SO₂ Data Requirements Rule

Progress on 2010 SO₂ NAAQS Attainment

(as of March 2018)

	Round 1	Round 2	Round 3
Initial Nonattainment Areas	29	7	6
Areas Redesignated to Attainment	2	0	0
Current Nonattainment Areas	27	7	6
Clean Data Determinations	1	0	0



2016 Exceptional Events Rule Implementation

- Since finalizing the 2016 rule, EPA has concurred on ozone demonstrations for CT, MA, MD, NJ, PA, RI, TX, Ute Tribe (Utah), and Washoe County (Nevada)
- We remain focused on continuous improvement by engaging with stakeholders, addressing concerns, and streamlining the process
- We are hopeful that many of the things we are already doing or working to implement under the revised rule are addressing existing concerns such as ensuring timely review processes, right-sizing demonstrations, fostering national consistency, and providing additional resources like updated FAQs and technical guidance documents



Exceptional Events: Additional Resources and Engagement to Improve the Process

- EPA resources now available online – Google “EPA Exceptional Events”
 - Wildfire-Ozone Guidance
 - 2007-to-2016 Rule Crosswalk
 - Best Practices for Multi-State Exceptional Events Demonstrations
 - Mitigation Plan Checklist
 - Example Demonstrations
- Additional implementation documents planned for this year
 - Updated FAQs
 - Updated High Winds
 - Stratospheric Ozone Intrusion
 - Prescribed Fire-Ozone
 - Alternate Paths for Data Exclusion
- Stakeholder engagement – National call on Alternate Paths and webinar on Mitigation Plans
- EPA developing national electronic tracking system for exceptional events (similar to SPeCS for SIPs)

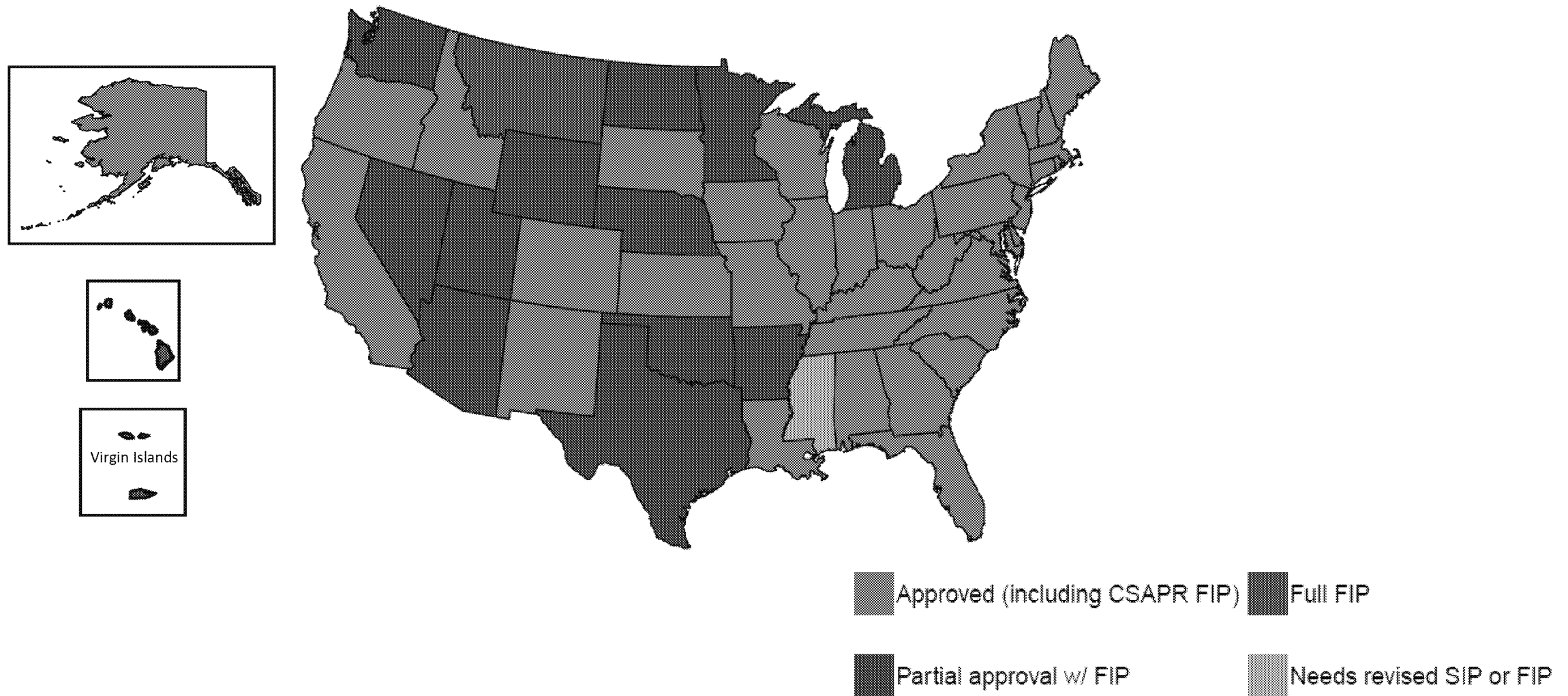


Continued Emphasis on Early and Frequent Communication

- The 2016 Exceptional Events Rule eliminated event flagging and demonstration submission deadlines with the exception of initial area designations
 - Informational or 'I' flags are encouraged for initially flagging suspected events
 - Request exclusion or 'R' flags should be used when a demonstration will be submitted
- The new **Initial Notification Process** starts a conversation between EPA and air agencies to establish mutual expectations for “right-sizing” effort, assessing the purpose for data exclusion, and identifying what is needed for an approvable demonstration
- EPA intends to conduct initial review of demonstrations within 120 days of submission, complete review within 12 months, and defer demonstrations that do not have regulatory significance within 60 days



Regional Haze: Status of Actions from First Implementation Period



CSAPR-better-than-BART

Recent Court Opinion:

- The D.C. Circuit recently (March 20, 2018) issued an opinion upholding EPA's 2012 CSAPR-better-than-BART rulemaking. This opinion also upheld EPA's disapprovals of several SIPs that relied on CAIR
 - The litigation in this case was in abeyance for several years while litigation on CSAPR played out
 - CSAPR-better-than-BART is currently used in regional haze plans for nineteen states

CSAPR-better-than-BART reaffirmation:

- In September 2017, EPA reaffirmed that CSAPR remains better-than-BART despite some changes to the CSAPR trading programs
- EPA received petitions for review and reconsideration on the reaffirmation rulemaking; no updates on next steps or schedule



Regional Haze: Second Implementation Period

- EPA is already working with states and groups of states on the second planning period
- Key principles for implementation of the second planning period include:
 - Ensuring that states have the information they need to develop approvable regional haze plans
 - Ensuring that states have discretion and flexibility to select sources for reasonable progress analysis
 - Ensuring that we are on a path that enables compliance with the Clean Air Act, improved visibility in Class I areas, and state discretion regarding whether and how to control sources of visibility-impairing pollutants



Regional Haze Rule and Guidance Updates

- **Rule revisions were finalized on January 10, 2017 (82 FR 3078):**
 - Petitions for review were filed in the D.C. Circuit as well as petitions for reconsideration
 - On January 17, 2018, EPA announced its decision to revisit aspects of the 2017 rule revisions:
 - “EPA intends to commence a notice-and-comment rulemaking in which we will address portions of the rule, including but not limited to the Reasonably Attributable Visibility Impairment (RAVI) provisions, the provisions regarding Federal Land Manager (FLM) consultation, and any other elements of the rule we may identify for additional consideration. Furthermore, EPA plans to finalize one or more EPA guidance documents for regional haze State Implementation Plan (SIP) revisions due in 2021. Such guidance may also address some or all of the issues raised in the petitions for reconsideration.”
 - EPA asked the D.C. Circuit to place the litigation into abeyance “pending administrative proceedings that may result in changes or clarifications to the challenged rule and thereby potentially narrow the scope of this litigation;” motion granted January 30, 2018
- **On July 8, 2016 (81 FR 44608), EPA released draft guidance**
 - Next steps on guidance are expected to be developed as EPA initiates regulatory review of the 2017 rule revisions



NSR Improvements and Other Recent Actions

- Actual-to-Projected-Actual Applicability Test Guidance Memorandum
- Project Emissions Accounting Memo
- Project Emissions Accounting Rulemaking
- Source Aggregation Guidance
- Project Aggregation Reconsideration
- Ambient Air Guidance
- Rulemaking on Treatment of Biomass for Permitting
- PM_{2.5} and Ozone SILs Guidance
- Routine Maintenance, Repair and Replacement (RMRR)
- Once-In-Always-In

NSR Updates: Actual-to-Projected-Actual Applicability Test Guidance Memorandum

- **Memorandum: “New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected-Actual Applicability Test in Determining Major Modification Applicability”** signed by Administrator Pruitt on December 7, 2017
 - Available at https://www.epa.gov/sites/production/files/2017-12/documents/policy_memo.12.7.17.pdf
 - Where a source projects an insignificant emissions increase, the level of actual emissions after the project governs applicability
 - Projections may reflect the intent to actively manage post-project operations in order to prevent a significant emissions increase from occurring
 - EPA will not second guess NSR applicability analyses that comply with the procedural requirements of the regulations



Project Emissions Accounting (Project Netting) Guidance Memorandum

- **Memorandum: “Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program”** was published on March 30, 2018 (83 FR 13745)
 - Available at www.gpo.gov/fdsys/pkg/FR-2018-03-30/pdf/2018-06430.pdf
 - Communicates EPA’s interpretation that the current NSR regulations provide that emissions decreases as well as increases are to be considered at Step 1 of the NSR applicability process, i.e., determining whether a project will result in a significant emissions increase
 - Interpretation is grounded in the principle that the plain language of the CAA indicates that Congress intended to apply NSR to changes that increase actual emissions and the language in the corresponding NSR regulations is consistent with that intent
- Prior EPA guidance had indicated that the relevant provisions of the NSR regulations preclude the consideration of emissions decreases at Step 1
 - For the reasons discussed in the memo, EPA will no longer apply such interpretation



Project Emissions Accounting (PEA) Proposed Rule

- EPA published on March 30, 2018, the **Issuance of Guidance Memorandum, “PEA Under the New Source Review Preconstruction Permitting Program”**
- As discussed in the memo, this clarification will apply to all project categories (including existing units only, new units only, and new and existing units)
 - Memo can be found at www.gpo.gov/fdsys/pkg/FR-2018-03-30/pdf/2018-06430.pdf
- A proposal will codify the considerations and interpretations reflected in the memorandum
 - Current schedule: Fall 2018



Source Aggregation

- EPA defines “*stationary source*” in the permitting programs as all of the pollutant-emitting activities that are:
 - located on one or more contiguous or adjacent properties *and*
 - are under common control of one person (or persons under common control), *and*
 - belong to the same major industrial grouping (2 digit SIC code)[40 CFR 70.2 and 52.21(b)(1) and (5)]
- EPA’s interpretation of “adjacent” has evolved through source-specific determinations
 - 2016 Rulemaking clarified “adjacent” for oil and gas operations
 - Adjacent operations are limited to those within ¼ mile with shared equipment
- EPA’s determinations of whether “common control” exists have been based on an assessment of multiple factors
 - We are evaluating whether/how to further refine the factors that must be assessed
- EPA intends to address “adjacent” and “common control” in upcoming actions



Project Aggregation Reconsideration

- 2009 Rule for Project Aggregation
 - Established “substantially related” criterion for aggregating projects, and a 3-year rebuttable presumption against aggregating
 - Did not amend the CFR text (definition of “project”), considered an interpretive rule
 - Calling it a “new interpretation” of the rule text, it only applies prospectively
- Reconsideration and Stay of the 2009 Rule
 - NRDC petitioned for reconsideration and sued EPA on the 2009 Rule
 - EPA granted reconsideration and stayed the effectiveness of the 2009 Rule pending completion of the reconsideration or litigation
 - In 2010, EPA proposed reconsideration with a preference to revoke 2009 Rule
- Current Action – Final Reconsideration Rule
 - Current schedule: Summer 2018



Ambient Air Guidance

- EPA defines “*ambient air*” as “that portion of the atmosphere, external to buildings, to which the general public has access” (40 CFR 50.1(e))
 - EPA’s longstanding policy for implementing ambient air for PSD purposes was stated in a 1980 Costle letter, “*the atmosphere over land that is owned or controlled by the source and to which public access is precluded by a fence or other physical barriers*”
 - Subsequent guidance provided over the years by EPA to recommend how to apply 1980 policy statement for specific situations
- We are evaluating several key terms associated with the definition including: “general public”, “access” and “building” to determine where additional flexibility may be appropriate
- EPA is anticipating issuing guidance in Spring 2018



Treatment of Biogenic CO₂ Emissions in Permitting

- On February 13, 2018, EPA issued a response to New Hampshire reflecting its current views on the programmatic treatment of biomass
- In this letter, EPA clarifies, among other things, that:
 - The Consolidated Appropriations Act of 2017 urges the proactive recognition of forest biomass as being both carbon neutral and a source of renewable energy
 - Spurred by this congressional action, EPA is engaged in a multi-agency effort with DOE and USDA to establish a mechanism for federal cooperation and consistency on the use of biomass for energy throughout the federal government
 - EPA will be developing a set of options consistent with the carbon neutral policy of biomass from forests and other lands sectors to provide certainty for the treatment of biomass throughout the Agency's permitting decisions
- Letter at: <https://www.epa.gov/air-and-radiation/policy-update-epa-programmatic-treatment-biomass-and-forest-products-industry>



PM_{2.5} and Ozone SILs Guidance

- EPA is developing both a revised PM_{2.5} SIL and new ozone SIL for permittees to use in streamlining the air dispersion modeling permitting process
- The guidance will be comprised of a policy memorandum, a technical document and legal support document
 - All three are intended to be referenced and included in any permit record where the recommended SILs are used by a permitting authority
 - The guidance is not a final agency action and is not binding for industry, permitting authorities, or the public
- An informal public comment was accomplished in 2016
- The guidance is currently under OMB review
- Projected signature of guidance - Spring 2018



Routine Maintenance, Repair and Replacement

- EPA believes there is uncertainty regarding the interpretation of the Routine Maintenance, Repair and Replacement (RMRR) provisions in the New Source Review program
- EPA is evaluating the need to clarify the interpretation and appropriate application of the RMRR provision under the NSR regulations
- EPA anticipates clarification in Spring 2018



Once In Always In

- **2018 EPA Withdraws Once In Always In**

- On January 25, 2018, EPA issued guidance memorandum, “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act”
- Memo addresses when a major source subject to a maximum achievable control technology (MACT) standard, under section 112 of the Clean Air Act (CAA), may be reclassified as an area source and no longer subject to MACT requirements
- Discusses EPA’s plain language reading of the statutory terms “major source” and “area source”
- Withdraws 1995 Seitz memo “Once In Always In” policy, which required major sources to limit potential to emit to below the major source threshold by the first compliance date to be treated as an area source
- Responds to comments received in response to E.O. 13777 and 13783 on the need to revise 1995 OIAI policy
- EPA intends to issue a FR Notice to take comment on regulatory text to implement EPA’s plain language reading of statute as discussed in January 2018 guidance memorandum

- **Litigation**

- On March 26, 2018, coalition of environmental groups filed a petition for review in the D.C. Circuit Court

- **For More Information**

- <https://www.epa.gov/stationary-sources-air-pollution/reclassification-major-sources-area-sources-under-section-112-clean>
- Contact: Debra Dalcher, Policy and Strategies Group, 919-627-4883 or Dalcher.debra@epa.gov



Title V Permitting

- Rulemakings in progress
 - Petitions Process Rulemaking
- Process Improvements
 - Increased use of electronic systems
 - Central Data Exchange (CDX) for receipt of petitions
 - Beta test of permit submission system in Region 9
- Lean Kaizen Event held on March 26, 2018
 - See subsequent slide for more information



Title V Petitions

- Title V Petitions continue to be a substantial work load
- Petitions Received FY 2018 (to date) – 8
- Petitions Resolved FY 2018 (to date) – 22
 - 15 Orders
 - 7 Resolved by other means (petitioners agreed to withdraw, previous responses identified)
- Pacificorp Hunter – EPA will not look back at decisions made in NSR permitting process in the context of title V
 - Provided that there was an opportunity for public comment and judicial review
 - Decision being challenged in 10th Circuit (Utah) and D.C. Circuit



Title V Permitting – Fee Guidance

- In response to a 2014 Office of Inspector General (OIG) report recommending enhanced oversight of state and local title V program fee practices, EPA issued two guidance documents on March 27, 2018.
 - *Program and Fee Evaluation Strategy and Guidance for 40 CFR Part 70* (Title V Evaluation Guidance) and
 - *Updated Guidance on EPA Review of Fee Schedules for Operating Permit Programs under Title V* (Updated Fee Schedule Guidance)
- These documents satisfy EPA commitments to the OIG by providing guidance for EPA regions on conducting state and local title V program and fee evaluations.
- The guidance is discretionary for EPA regions and sets no specific requirements for state programs.



SIP Processing Improvements

- High priority continues to be reducing the SIP backlog and improving SIP processing times
- Trends in SIP processing:
 - Total pending SIPs reduced by 20% (between October 2013 and March 2018)
 - Historic backlogged SIPs reduced by 80% (between October 2013 and March 2018)
- SIP management improvement efforts ongoing
 - SIP management plans continue to provide opportunities for EPA regional offices and states to engage on setting SIP action priorities
 - EPA emphasizing early engagement with air agencies
 - Continued commitment to providing timely guidance on SIP development issues
 - EPA maintaining emphasis on internal SIP processing improvements
 - Using lean practices to inform opportunities for continuous improvement
 - Significant investment in IT improvements will also contribute in this area



SIP Processing Improvements:

State Plan Electronic Collaboration System (SPeCS)

- EPA worked extensively with state air agency representatives, and partnered with E-Enterprise for the Environment and ECOS on this project over the past 18 months
 - The E-Enterprise Integrated Project Team (IPT), with 12 air agency representatives, provided useful feedback on the Plan Collection Interface (PCI) module
 - Fourteen states participated in beta testing before system was launched in January 2018
 - Training webinars and materials: <https://www.epa.gov/air-quality-implementation-plans/submit-sips-online>
- Benefits
 - Reduce paper/mailling/printing/storage costs
 - Save staff time and resources
 - Integrate multiple legacy tracking systems into one
 - Increase transparency
 - Achieve more efficient SIP processing

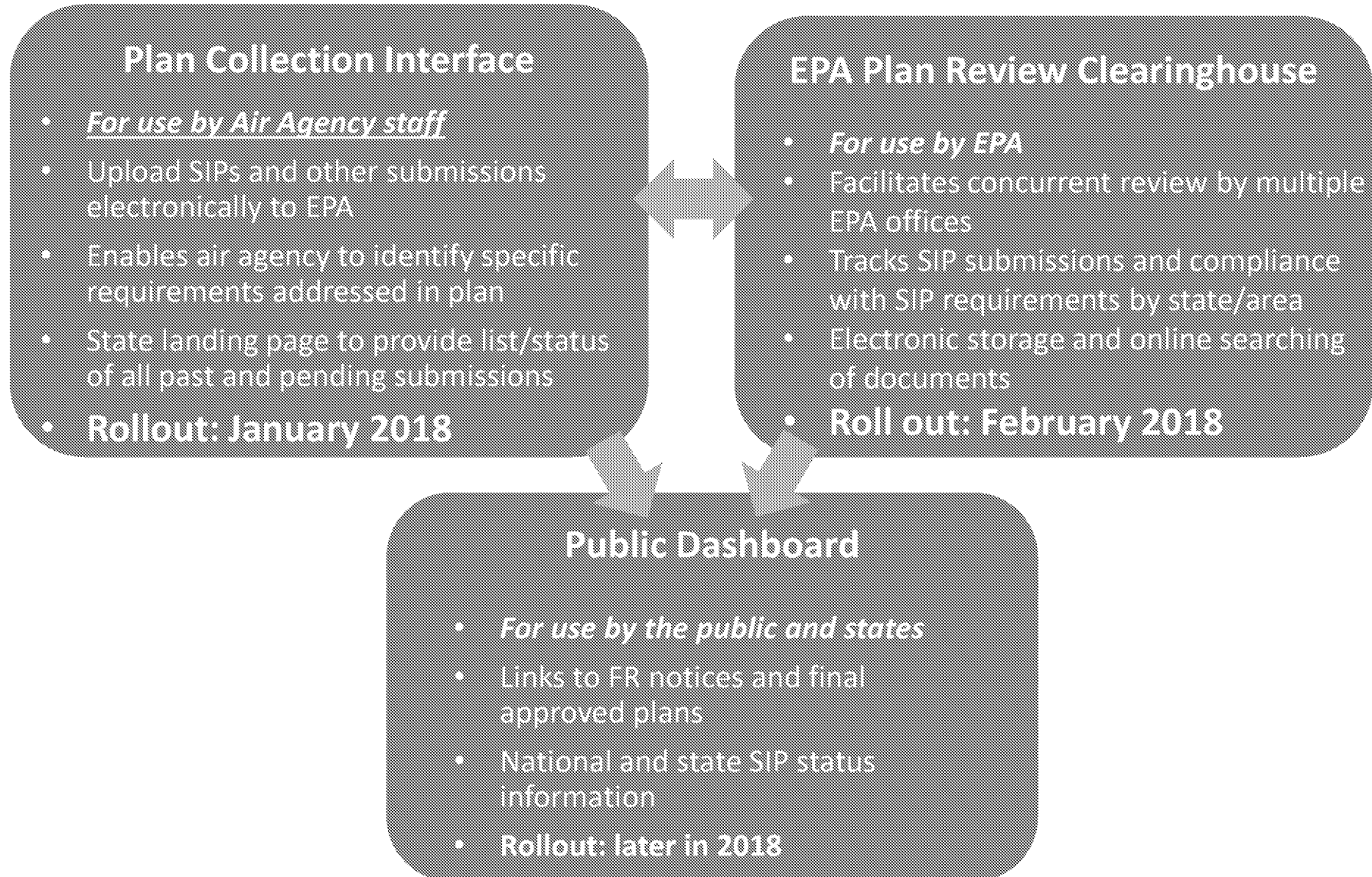


SIP Processing Improvements: State Plan Electronic Collaboration System (SPeCS)

- Plans for 2018 and beyond (with sufficient funding) include:
 - Enhance State Plan Collection Interface based on ongoing user feedback
 - Develop Public Dashboard
 - Develop an Exceptional Events demonstration module
 - Develop Title V module for EPA review of state issued permits
 - Develop NSR Permit Tracking System and Technology Database
 - Coordinate SPeCS with SIP Lean efforts



State Plan Electronic Collaboration System (SPeCS)



EPA is Implementing a Lean Management System (LMS)

EPA Desires:

- Continuous improvement through problem solving at the level closest to the work
- Continuous improvement based on respect for the people doing the work
- Accountability to the process without blaming people
- Sustainment of gains from its improvement efforts
- Development and adherence to standard processes

LEAN MANAGEMENT SYSTEM



Lean Priority Areas

- Applying lean principles to specific focus areas to:
 - Develop visual management systems
 - Identify and eliminate waste consistent with lean principles
 - Develop a more efficient and effective process
- Key areas identified include SIP processing, NSR, and Title V
- Timely action on SIPs is a priority for EPA, as reflected in EPA's recently released Strategic Plan for FY2018 – 2022 and the Agency's Reform Plan
- The Reform Plan highlights priority areas where EPA plans to apply lean tools in order to make further progress, with a new emphasis at EPA on the use of visual management tools
- SIP lean event held in February 2018 focused on both EPA process and state process – and included participants from states and a local area
 - Goal of SIP lean event was to develop process and tools that would enable EPA to eliminate the backlog and process SIPs within CAA timelines, by 2022

SIP Lean Overview and Next Steps

- Identified an ideal process that includes an emphasis on cooperative federalism and working closely with states at the outset so that states are able to submit approvable SIPs
- Described key decisions throughout the process, including the details of who should make those decisions, when, and other aspects of those decisions
- Outlined opportunities for standard work to ensure consistency across regional offices and with EPA HQ
- Considered options for addressing current pending SIPs while also implementing the new process
- Implementation details are still being developed
 - We are eager to stand this new system up as quickly as we can, and will keep you posted on our progress

NSR and Title V Lean/Kaizen Efforts and Next Steps

- As part of the Agency streamlining efforts, we are taking a look at the permitting process and timelines for EPA-issued permits under both Title V and NSR
- We are applying Lean/Kaizen concepts to the permitting process with the goal of identifying actions we could take to expedite the process and make permitting more efficient
 - These events are focused on EPA-issued permits
- During the week of March 26, 2018, EPA HQ and Regions conducted a week-long Kaizen event focused on the Title V program
- A week-long Kaizen event for the NSR program is scheduled for the week of April 9, 2018



Questions and Comments



APPENDIX

NAAQS Reviews: Status Update

April 2018

	Ozone	Lead	Primary NO ₂	Primary SO ₂	Secondary (Ecological) NO ₂ , SO ₂ , PM ¹	PM ²	CO
Last Review Completed (final rule signed)	Oct. 2015	Sept 2016	Jan 2010	Jun 2010	Mar 2012	Dec 2012	Aug 2011
Recent or Upcoming Major Milestone(s)³	TBD ⁴	TBD ⁴	<u>July 14, 2017</u> Proposal <u>Sept 25, 2017</u> Public Comment Closed <u>April 6, 2018</u> Final	<u>Sept. 18-19, 2017</u> CASAC review of draft PA and REA <u>May 25, 2018</u> Proposal <u>Jan 28, 2019</u> Final	<u>May 24-25, 2017</u> CASAC review of 1 st Draft ISA <u>Late 2018</u> 2 nd Draft ISA REA Planning Document	<u>Late 2018</u> 1 st draft ISA	TBD ⁴

Additional information regarding current and previous NAAQS reviews is available at: <http://www.epa.gov/ttn/naaqs/>

¹ Combined secondary (ecological effects only) review of NO₂, SO₂ and PM

² Combined primary and secondary (non-ecological effects) review of PM

³ IRP – Integrated Review Plan; ISA – Integrated Science Assessment; REA – Risk and Exposure Assessment; PA – Policy Assessment

⁴ TBD = to be determined



Anticipated NAAQS Implementation Milestones

(March 2018)

Pollutant	Final NAAQS Date	Nonattainment Designations Effective	Infrastructure SIP Due	Attainment Plans Due	Attainment Date
PM _{2.5} (2006)	Oct 2006	Dec 2009	Oct 2009	Dec 2014	Dec 2015 (Mod) Dec 2019 (Ser)
Pb (2008)	Oct 2008	Dec 2010-2011	Oct 2011	June 2012-2013	Dec 2015-2019
PM _{2.5} (2012)	Dec 2012	Apr 2015	Dec 2015	Oct 2016 (Mod)	Dec 2021 (Mod) Dec 2025 (Ser)
NO ₂ (2010) (primary)	Jan 2010	Feb 2012	Jan 2013	N/A	N/A
SO ₂ (2010) (primary)	June 2010	Oct 2013, Sept 2016 (+2 rounds)	June 2013	Apr 2015, Mar 2018 (Oct 2019, 2022)	Oct 2018, Sept 2021 (2023, 2026)
Ozone (2008)	Mar 2008	July 2012	Mar 2011	Mid 2015-2016	Mid 2015-2032
Ozone (2015)	Oct 2015	Mid Oct	Oct 2018	Mid 2021-2022	Mid 2021-2038



Oil and Natural Gas:

2016 New Source Performance Standards (NSPS) Update

- **March 2018 Amendments**

- EPA amended two narrow provisions of the 2016 NSPS to address aspects of the rule that pose significant and immediate compliance concerns:
 - Removing the requirement that leaking components be repaired during unplanned or emergency shutdowns;
 - Creating separate monitoring survey requirements for well sites located on Alaskan North Slope
 - Amendments were in response to public comments and information received in response to June 2017 proposed stays of certain requirements in the rule and subsequent Notices of Data Availability (November 2017)

- **NSPS Reconsideration**

- EPA is reconsidering certain aspects of the 2016 NSPS, including fugitive emissions requirements
 - Looking broadly at the rule during the reconsideration process
 - EPA is continuing to evaluate comments the agency received on proposed stays and NODAs
- EPA will issue a proposal addressing the reconsideration of the rule for public review and comment at a later date



Oil and Natural Gas: Control Technique Guidelines (CTG)

- **March 2018: EPA proposed to withdraw 2016 Oil and Gas CTG in its entirety**
 - The CTG provides recommendations for reducing volatile organic compounds emissions from existing oil and gas equipment and processes
 - CTGs are not regulations and do not impose legal requirements directly on pollution sources
 - However, once EPA issues a CTG, states must make RACT determinations for the sources it covers
 - Because some recommendations in the Oil and Gas CTG are based on the 2016 NSPS, and others are based on the NSPS issued in 2012, EPA believes withdrawing the entire Oil and Gas CTG will be more efficient for states
 - EPA is currently reconsidering certain aspects of the 2016 NSPS and intends to look broadly at the rule during the reconsideration process
 - Comment period on the proposed CTG withdrawal ends April 23, 2018
- **For More Information**
 - <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry>
 - Contact: David Cozzie, Group Leader, Fuels and Incineration Group, 919-541-5356 or cozzie.david@epa.gov



Municipal Solid Waste Landfills: New Source Performance Standards (NSPS) and Emission Guidelines (EG)

- **Background**

- August 29, 2016, EPA announced final updates to the NSPS to reduce emissions of methane-rich landfill gas from new, modified and reconstructed municipal solid waste (MSW) landfills
- EPA also issued EGs for reducing emissions from existing MSW landfills

- **Petition for Reconsideration and Judicial Review**

- May 5, 2017, EPA granted reconsideration to petitions on various issues regarding the 2016 MSW Landfills NSPS and EG
- May 31, 2017, EPA issued a 90-day stay on the 2016 NSPS and EG
 - Because the 90-stay expired on August 29, 2017, the 2016 rules are currently in effect
- EPA is developing the reconsideration process and path forward on these actions
- Notice of Intent to sue from several states for failure to enforce the 2016 EG and compliance times of the rule



Municipal Solid Waste Landfills: NSPS and EG (con't)

- **NSPS**

- With the March 13, 2020, court ordered deadline to complete the risk and technology review (RTR), EPA plans to align the NSPS reconsideration with the RTR, with a proposal expected in 2019
- This will provide clarity for regulated entities, pose less burden and add additional regulatory certainty to landfills covered by both regulations
- EPA continues to consider whether additional steps could be appropriate during reconsideration

- **EG**

- Under these guidelines, the Clean Air Act section 111(d) state plans for addressing existing landfills were due May 30, 2017
- At this time, EPA has neither approved nor disapproved the state plans that were timely submitted, nor has EPA promulgated any federal plans

- **For More Information**

- <https://www.epa.gov/stationary-sources-air-pollution/municipal-solid-waste-landfills-new-source-performance-standards>
- Contact: Robin Dunkins, Group Leader, Natural Resources Group, 919-541-5335 or dunkins.rob@epa.gov



Message

From: South, Peter [South.Peter@epa.gov]
Sent: 3/7/2018 9:43:54 PM
To: Mathias, Scott [Mathias.Scott@epa.gov]
Subject: RE: Update Ozone Designation Document

OK—got it.

From: Mathias, Scott
Sent: Wednesday, March 07, 2018 4:41 PM
To: South, Peter <South.Peter@epa.gov>
Cc: Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: RE: Update Ozone Designation Document

Just found 2 typos.....here's corrected version.

Scott Mathias | Associate Director, Air Quality Policy Division | U.S. EPA, RTP, NC 27711 | 919.541.5310

From: South, Peter
Sent: Wednesday, March 07, 2018 4:40 PM
To: Mathias, Scott <Mathias.Scott@epa.gov>
Cc: Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>; Koerber, Mike <Koerber.Mike@epa.gov>
Subject: Update Ozone Designation Document

I'd rather not resend (to avoid confusion) but I will replace in Bill's folder in DC and the folders here (for the OAR-IO visitors). I'll send around electronically to the OAQPS meeting invitees. Please bring copies for the room.

Thanks.

From: Mathias, Scott
Sent: Wednesday, March 07, 2018 4:35 PM
To: South, Peter <South.Peter@epa.gov>
Cc: Johnson, Yvonne W <Johnson.Yvonnew@epa.gov>
Subject: RE: RTP Meetings on Mar 8

Pete,

Please consider updating the ozone designations session with the attached updated file. I think it will be a better guide to our discussion.

Scott Mathias | Associate Director, Air Quality Policy Division | U.S. EPA, RTP, NC 27711 | 919.541.5310

From: South, Peter
Sent: Wednesday, March 07, 2018 4:26 PM
To: OAQPS SMT1 <OAQPS_SMT1@epa.gov>; OAQPS SMT2 <OAQPS_SMT2@epa.gov>
Subject: RTP Meetings on Mar 8

FYI

<< File: 0_Final Agenda 03_08_18.docx >>

	Bill	David	Mandy	Clint	Justin
7:40 am		Arrival at RDU Airport (AA Flight #4353)			
8:30 to 9:00	Oil and Gas FOIA Room No.: EPA RTP C401A; Call in: <div></div> <i>No materials</i>				
9:00 to 9:45	Ozone Update/NAAQS Schedule Room No.: EPA RTP C401A; Call in: <div></div> << File: 1_NAAQS schedule 03_08_18.docx >>				
10:00 to 10:45	Surface Coating Room No.: EPA RTP C401A; Call in: (no VTC): <div></div> << File: 2_Coatings RTRs 03_08_18.docx >>		Regional Haze Room No.: EPA RTP C500A Call in: <div></div> <i>No materials</i>		Surface Coating
11:00 to 11:45	AirNow Room No.: EPA RTP C401A <div>Redacted</div> << File: 3_a_AirNow 03_08_18.pptx >>	ExxonMobil Title V Room No.: EPA RTP 501A <div>Redacted</div> << File: 3_b_Baytown Refinery title V 03_08_18.docx >>	AirNow		ExxonMobil Title V
12:00 to 12:45	Lunch				Title V Meet and Greet Room No.: EPA RTP C500A <i>No materials</i>
12:45 to 1:00		Public Meetings Room No.: EPA RTP C401A Call in: <div>Redacted</div> <i>Materials will be provided in meeting room</i>			
1:00 to 1:45	Ozone Designations Room No.: EPA RTP C401A; Call in: <div>Redacted</div> << File: 4_2015 O3 Designat Update 03_08_18.docx >>				
2:00 to 2:45	Permit Modelling/App W Room No.: EPA RTP C401A <div>Redacted</div> << File: 5_Permit modeling 03_08_18.docx >>	Biomass Room No.: EPA RTP 500A; <div>Redacted</div> <i>No materials</i>	Permit Modeling/App W		Biomass

ED_004741_00141016-00002

3:00 to 3:45	Source Aggregation Room No.: EPA RTP C40 Redacted Redacted << File: 6_a_Source Aggregation 03_08_18.docx >>	Transport Analysis Room No.: EPA RTP C335I Redacted << File: 6_b_Transport 03_08_18.pptx >>	Source Aggregation
4:00	Depart for Airport for 5:30 flight (AA flight #4351)		



Spring 2018 Full deck w/TPs

Revised 4/2/2017 (8:00 pm)

Incl. Mike K and Harlow Comments

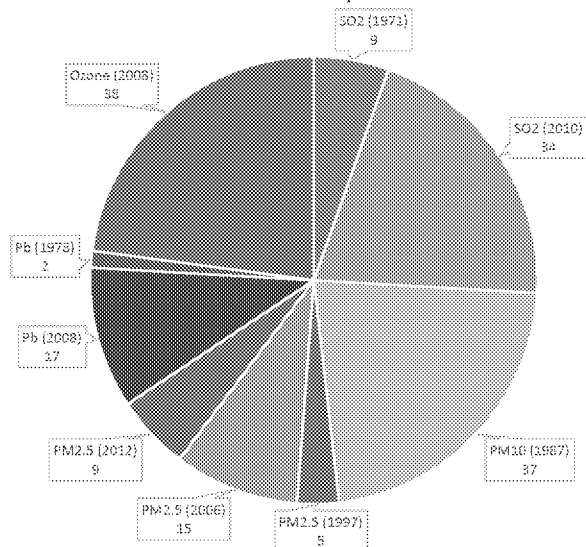
Incl: SPPD slides for landfills, Oil and Gas, and waiting on OIAI slide

OVERVIEW

- EPA's Clean Air Priority Goal: Reduce Number of Nonattainment Areas
- NAAQS Implementation Updates
 - Ozone
 - Sulfur Dioxide (SO₂)
 - Fine Particulate Matter (PM_{2.5})
- Exceptional Events
- Transport
- Regional Haze
- Startup, Shutdown, and Malfunction (SSM) Policy
- NSR and Title V Permitting Updates
- SIP Processing Improvements, SPeCS and LEAN



Nonattainment Areas for Non-revoked NAAQS as of October 1, 2017



EPA Priority Goal: Reduce Number of Nonattainment Areas

- Work with states to prioritize redesignation submissions.
- Ensure states have necessary rules, guidance, and tools.
- Improve the efficiency and effectiveness of the SIP/TIP process, including EPA's review process, to maximize timely processing of requested SIP/TIP actions.
- Take federal oversight actions, where necessary.

Approving state requests to redesignate nonattainment areas depends on states meeting the minimum Clean Air Act requirements, which include:

- A demonstration that the area has air quality that is attaining the NAAQS;
- Establishing that pollution reductions are due to implementing permanent and enforceable measures;
- A 10-year maintenance plan that includes contingency measures to be triggered in the event of a re-violation of the NAAQS; and,
- Satisfying any other applicable and outstanding attainment planning and emissions control requirements.

[UPDATED 3/06/18 SLM]

There were 166 total nonattainment areas (baseline) for non-revoked standards as of 10/1/2017 (start of 1st quarter of FY 2018).

To facilitate this goal, EPA is committing to taking actions to (1) reduce emissions to improve air quality (e.g., mobile source programs and CSAPR), (2) improve our support to state agencies (e.g., rules, guidance and process improvements), and (3) follow the rule of law governing EPA's federal oversight responsibilities (below).

EPA fulfills its federal NAAQS implementation oversight role using tools available under the CAA to work with states in a manner consistent with the principles of cooperative federalism to fulfill attainment planning responsibilities.

EPA's Clean Air Priority Goal FY2018-2022: Reduce Number of Nonattainment Areas

FISCAL YEAR	GOAL (from 166 areas)*	ACTUAL (thru FY18 Q2)
FY2018	155	163
FY2019	146	
FY2020	144	
FY2021	140	
FY2022	101	

* The baseline of 166 is the number of areas designated nonattainment for non-revoked standards as of 10/1/2017 (start of 1st quarter of FY 2018).



[UPDATED 3/06/18 SLM]

The formulation of this goal reflects the new EPA leadership's focus on the ongoing business development implications of nonattainment designations, including nonattainment new source review permitting requirements (e.g., LAER and offsets for new/modified major sources).

Multi-state areas are counted as 1 NA area. Redesignation to attainment is not achieved until all portions of the area are officially redesignated to attainment with an EPA-approved maintenance plan.

2008 Ozone NAAQS: Implementation

- **2008 Ozone NAAQS Key implementation dates for nonattainment areas:**
 - * Emissions inventories, emissions statement rules and RACT SIPs were due July 2014
 - * Attainment plans and demonstrations were due July 2015 (Moderate) or July 2016 (Serious and above)
 - * Marginal area attainment date July 20, 2015 (attainment determined by 2012-2014 air quality data)
 - * Moderate area attainment date July 20, 2018 (2015-2017 air quality data)
- EPA to make determinations of whether Moderate nonattainment areas attained the 2008 standard by the July 20, 2018, attainment date.
 - * Final action must be completed by January 20, 2019.



[UPDATED 2/27/18 RDL] scott 3/9

Litigation on the 2008 SRR has been in play since May 2015 (oral arguments were in September 2017), and the D.C. Circuit issued its decision on February 16, 2018.

We'll describe the "South Coast (2018)" decision in more detail in the following slides, but will note here that the Court reversed our revocation approach that would allow an area to avoid bump-up for failing to attain the revoked 1997 standard.

Examples of ongoing 2008 implementation actions include:

Review of attainment demonstrations and other required SIP revisions (e.g., RACT) for Marginal areas bumped up to Moderate upon failing to attain the 2008 standard by the July 20, 2015 attainment date.

We are watching if some 2008 Moderate areas will be eligible for a 1-year extension of the July 20, 2018 attainment date (as of 2/27/18: Sheboygan looks solid, and Denver may qualify if they submit an approvable EE claim).

List of 14 Moderate areas not meeting 2008 ozone NAAQS based on preliminary 2017 data:

Chicago-Naperville, IL-IN-WI

Dallas-Fort Worth, TX

Denver-Boulder-Greeley-Ft. Collins-Loveland, CO

Greater Connecticut, CT

Houston-Galveston-Brazoria, TX

Imperial County, CA

Kern County (Eastern Kern), CA

Mariposa County, CA

Nevada County (Western part), CA

New York-N. New Jersey-Long Island, NY-NJ-CT

Pechanga Band of Luiseno Mission Indians, CA

Phoenix-Mesa, AZ (should attain with EE claim approval)

San Diego County, CA

Sheboygan County, WI

2008 Ozone NAAQS: Findings of Failure to Submit

- On January 13, 2017, in response to a complaint filed by environmental petitioners, the EPA found that 15 states and the District of Columbia failed to submit certain SIP revisions required under the 2008 ozone NAAQS (82 FR 9158; February 3, 2017; effective March 6, 2017)
 - EPA also entered into a Consent Decree with the petitioners on January 19, 2017, which sets deadlines for EPA to complete final actions on SIP submittals by various dates ranging from June 2017 to July 2018
- On November 29, 2017, also in response to a complaint filed by environmental petitioners, the EPA found that 3 states failed to submit various SIP submittals required for 2008 ozone NAAQS nonattainment areas reclassified to Moderate in 2016 (82 FR 58118; December 11, 2017; effective January 10, 2018)
 - These findings of failure to submit served as formal notice to air agencies and established deadlines by which they either must submit complete SIP revisions or become subject to mandatory sanctions



Scott 3/9

(1st bullet) States named in the FFS and nature of SIPs subject to FFS:

States are: CA, CT, D.C. (Washington), DE, IL, IN, ME, MD, MA, NH, NJ, PA, RI, VA, VT and WI.

FFS action effective date: March 6, 2017

Plaintiffs: R. Ukeiley on behalf of Center for Biological Diversity, the Center for Environmental Health, and the Clean Air Council

Plaintiff lists numerous CTGs from states that are due and includes NSR SIPs

States are working on making submissions in response to the FFS in order to avoid sanctions (see below).

(2nd Bullet) States named in the FFS and nature of SIPs subject to FFS:

States are CA, IL, and NJ for 5 areas:

Kern County (Easter Kern) (CA) – NNSR and RACT for major NOx sources

Mariposa County (CA) – emissions statement rule and NNSR

Nevada County (Western Part) (CA) – emissions statement rule; RACT for NOx and VOC; attainment demonstration, RFP, and contingency measures

Chicago-Naperville (IL) – vehicle I/M; NNSR; RACT for NOx and VOC; attainment demonstration, RFP, and contingency measures

New York-N. New Jersey – Long Island (NJ) – RACT for NOx and VOC; attainment demonstration, RFP, and contingency measures

FFS action effective date: January 10, 2018

Plaintiffs: R. Ukeiley on behalf of Center for Biological Diversity and Center for Environmental Health

(3rd bullet) General (for both FFS actions): Consequences of FFS (Mandatory sanctions and FIP obligation)

Emissions offset sanctions (higher offset ratios for permitting) would be triggered if an affected state has not submitted the required SIP submittal within 18 months of the FFS effective date. If the state has not made a complete submission within 6 months after the offset sanction is imposed, this would trigger highway funding sanctions in the affected nonattainment area (NOTE: only applies to nonattainment areas, and not to OTR states without 2008 nonattainment areas).

EPA must promulgate a Federal Implementation Plan (FIP) no later than 2 years after the FFS effective date if an affected state has not submitted, and the EPA has not approved, the required SIP submittal

2008 Ozone NAAQS Implementation: Litigation

- ♦ **2008 Ozone NAAQS State Implementation Plan (SIP) Requirements Rule** (80 FR 12264; March 6, 2015)
 - ✦ Provides rules and guidance on nearly all aspects of the attainment planning requirements
 - ✦ Revoked the 1997 NAAQS effective April 6, 2015, and established anti-backsliding requirements

South Coast Air Quality Management District v. EPA (2018)

- ♦ South Coast AQMD and env. petitioners (Sierra Club *et al.*) challenged various elements of the 2008 Ozone NAAQS SIP Requirements Rule (SRR)
- ♦ The D.C Circuit issued its decision on February 16, 2018, upholding about half of the challenged elements and vacating several flexibilities in the SRR



Scott 3/9

Env. petitioners included Sierra Club, Conservation Law Foundation, Downwinders at Risk, and Physicians for Social Responsibility – Los Angeles.

Oral arguments were held on September 14, 2017.

South Coast challenged EPA's limiting "Reasonable Further Progress" or RFP emissions reduction credits to emissions reduced "in the area." South Coast alleged that the Agency erred by not allowing credit for "out-of-area" emission reductions that improve an air districts air quality within the NA area.

Environmental petitioners challenged EPA's 2008 SIP Requirements Rule provisions that revoked the 1997 Ozone NAAQS for all areas and purposes 1 year after designations are effective. The environmental petitioners also challenged how the 2008 rule addresses the anti-backsliding requirements. □

2008 Ozone NAAQS Implementation: Litigation (cont.)

- ***South Coast Air Quality Management District v. EPA (2018)*: Key Decisions Include:**

- **UPHELD:**

- RFP requirements including default 2011 baseline, one-time fulfillment of 15% VOC reduction, in-area restriction
 - RACT area-wide emissions averaging
 - EPA's authority to revoke a prior NAAQS with adequate anti-backsliding requirements

- **VACATED:**

- Anti-backsliding approaches for bump-ups, "redesignation substitutes," and transportation conformity
 - RFP alternative baseline years
 - 1997 NAAQS maintenance area flexibilities (maintenance plans, transportation conformity)

- EPA is assessing options for addressing Court decision and implications for implementation of the 2008 and 2015 NAAQS



The Court upheld RFP provisions that limit states to satisfying RFP with emission reductions within a nonattainment area, and that set 2011 as the default RFP baseline year because it was the most recent year that a triennial emissions inventory was available. The Court also upheld our RFP approach that requires an area to satisfy the 15% VOC-only reduction only once (this allows an area to substitute NOx to satisfy the 15% requirements under a subsequent standard).

The Court upheld our longstanding approach that allows states to demonstrate compliance with RACT requirements through area-wide averaged emission reductions, rather than through the installation of control technologies at every individual major source in a nonattainment area.

While the Court upheld our general authority to revoke a prior ozone standard with adequate anti-backsliding protections, they reversed our flexible approach that allowed an area to avoid a mandatory bump-up for failing to attain a revoked standard.

The Court ruled that these mandatory reclassifications are a "control" for anti-backsliding purposes.

The 2008 SRR also provided a flexible approach to lift anti-backsliding requirements under a prior revoked NAAQS called the "redesignation substitute," where an area could demonstrate that it has attained a revoked standard. The Court rejected this mechanism because it does not satisfy the Clean Air Act's criteria for a formal redesignation to attainment.

Regarding transportation conformity, the 2008 SRR considered on motor vehicle emissions budgets for the 1997 NAAQS as "controls" until 2008 budgets were available; however, the Court held that transportation conformity requirements in general are "controls" for anti-backsliding purposes.

For the 2008 NAAQS, we allowed states to justify the use of an alternative RFP baseline year between 2008 (when the NAAQS was revised) and 2012 (when areas were designated), but the Court rejected this flexible approach.

Finally, the 2008 SRR provided flexibilities for areas that were maintenance for the 1997 NAAQS when it was revoked and designated attainment for the more-stringent 2008 standards. These including waiving the requirement for a second maintenance plan and performing transportation conformity determinations for the 1997 standards. The Court ruled that EPA cannot get rid of these requirements

2015 Ozone NAAQS: Implementation-Related Rulemakings

- **Proposed Rule: Implementation of the 2015 NAAQS for Ozone: Nonattainment Area Classifications and SIP Requirements** published for public comment November 17, 2016 (81 FR 81276)
- **Final: 2015 Ozone NAAQS Classifications Rule** published March 9, 2018 (83 FR 10376)
 - * Final nonattainment area classification thresholds based on “percent-above-the-standard” (PATS) methodology
 - * Final maximum attainment dates associated with each nonattainment area classification
- **Final: 2015 Ozone NAAQS State Implementation Plan (SIP) Requirements Rule**
 - * To be issued after remaining area designations (later this spring)
 - * EPA will consider *South Coast v. EPA* (2018) decision in its final approach



[UPDATED 3/02/18 RDL] scott 3/9

National Ambient Air Quality Standards for Ozone Final Rule signed Oct. 1, 2015 (80 FR 65292), revising the primary & secondary 8-hour standards to 0.070 ppm

Related litigation is being held in abeyance while EPA reviews the 2015 rule to determine whether the standards should be maintained, modified, or otherwise reconsidered.

EPA was challenged on the level of the revised primary and secondary ozone standards, and must periodically report to the Court while the case is held in abeyance.

The proposed impl. rule provided interpretive rules and guidance on nearly all aspects of the attainment planning requirements for designated nonattainment areas for the 2015 ozone NAAQS

To support nonattainment area designations [ANTICIPATED BY APRIL 30, 2018], we issued a separate classifications final rule on March 1, 2018 that retains our existing approach for setting classification thresholds and attainment deadlines.

We are finalizing the SIP requirements portion of the 2015 NAAQS implementation rule, targeting Spring 2018 for issuance. The recent *South Coast* (2018) decision gave us pause to consider its implications for 2015 NAAQS implementation, which will be reflected in some aspects of the final rule.

FYI for Anna -- We proposed 2 options for revoking the 2008 Ozone NAAQS

Opt 1: revoke the 2008 NAAQS for all areas and purposes 1 year after designations are effective (historical ozone approach) with specific anti-backsliding provisions

Opt 2: revoke the 2008 NAAQS only in areas attaining the 2008 NAAQS at time of its revocation, and later for areas upon redesignation to attainment for the 2008 or 2015 NAAQS (similar to PM2.5 approach)

Opt 1 approach was rejected in part in *South Coast v. EPA* (2018) for revoking the 1997 NAAQS and we are assessing our 2008 revocation approach for the final rule

If asked about ozone NAAQS-related legislation:

We are monitoring for appropriation riders that would delay 2015 ozone NAAQS implementation.

HR806 (the “Olson Bill”) and its Senate counterpart (SR263) would delay 2015 NAAQS implementation until 2025, and extend the general NAAQS review cycle from 5 years to 10 years. Bills reside with Senate E&PW Committee and Sen. Capito (WV) has indicated in the press that S.263 may see floor action in 2018.

2015 Ozone NAAQS Area Designations

- The statutory deadline for designations was October 1, 2017
- **On November 6, 2017, the EPA issued final designations of attainment/unclassifiable for about 85% of the counties in the United States**
 - This included 2,646 counties, two separate areas of Indian Country areas and five territories
 - It also included a designation of unclassifiable for three counties in the state of Washington due to insufficient monitoring data to calculate a 3-year ozone design value
 - These final designations took effect on January 16, 2018, 60 days after the notice was published in the Federal Register

Scott 3/9

The statutory deadline for designations for the 2015 Ozone NAAQS was October 1, 2017. EPA is in deadline litigation with several parties (see below). EPA has indicated in the litigation the intention to complete designations by April 30, 2018 for all areas except San Antonio, TX (expected by August 10, 2018).

On December 4, 2017, several public interest groups, led by the American Lung Association, filed suit in the U.S. District Court for the Northern District of California, alleging that EPA has not met its obligation to designate all areas of the country for the 2015 ozone national ambient air quality standards.

The other parties joining the lawsuit are American Public Health Association, American Thoracic Society, Appalachian Mountain Club, Environmental Defense Fund, Environmental Law and Policy Center, National Parks Conservation Association, Natural Resources Defense Council, Sierra Club and West Harlem Environmental Action.

The parties ask the court to determine that EPA has failed to perform a nondiscretionary duty under the CAA, to enjoin the Administrator from continuing to violate that obligation, to order the Administrator to promulgate the remaining designations "forthwith," to retain jurisdiction to effectuate compliance with the Court's decree, to award Plaintiffs costs, and to grant other relief the Court deems just and proper.

Oral arguments were heard on February 22, 2018.

We are awaiting a decision from the court on deadlines for completing the designations.

All of the November 2017 designations were consistent with the recommendations from affected states and tribes. Therefore, because EPA did not modify the recommendations for these areas, 120-day notification letters were not required. EPA has not received any requests to reconsider these final designations within the 60-day requested deadline.

2015 Ozone NAAQS Designations (cont.)

- **On December 22, 2017**, EPA notified states and tribes concerning any intended modifications to their designation recommendations (“120-day letters”) for the remaining undesignated areas of the U.S.
 - EPA proposed 54 intended nonattainment areas and 3 unclassifiable areas, as well as additional attainment/unclassifiable areas and deferred taking action on the 8 counties in the San Antonio, TX metropolitan statistical area
 - Notification of availability and public comment period was published on January 5, 2018 (83 FR 651); comment period ended February 5, 2018
 - EPA requested States and Tribes to provide any final input by February 28, 2018
 - EPA is under court order to promulgate final ozone area designations for these areas no later than April 30, 2018



3/30

On March 12th the court ordered a 4/30/2018 designation deadline for all remaining areas except San Antonio, which has a June 10, 2018 deadline.

Also, the court recognized that the statute does not set forth a date by which designations must be made effective, but took note of EPA's representation that it intends to make the designations effective within 30 to 60 days and states that it "would consider whether a further order is necessary if it fails to do so."

For the 8 counties in the San Antonio MSA which were deferred:

The "120 day" letters were published on March 30, 2018

Designations are due on July 17, 2018

Progress on Ozone NAAQS Attainment

(as of March 2018)

	1997 NAAQS (2004 Designations)	2008 NAAQS (2012 Designations)
Initial Nonattainment Areas	115	46
Areas Redesignated to Attainment (prior to revocation)	80	8
Current Nonattainment Areas	35	38
Clean Data Determinations	26	18*
Redesignation Substitutes	2	n/a
Reclassifications to Higher Classification	0**	13

*Includes 15 Marginal area determinations of attainment by the attainment date and 3 Moderate area clean data determinations.

**Obligation to reclassify may be affected by South Coast II decision.



[UPDATED 3/22/18 scott]

NOTE regarding footnote*: the 3 Moderate areas receiving CDDs are Atlanta GA, Baltimore MD, and Mariposa County CA.

The impacts of the Dallas and Houston 1-hr & 1997 8-hr redesignation substitutes are shown in the Green book anti-backsliding table -- https://www3.epa.gov/airquality/greenbook/hn_appendixb_upd.html

The FRNs are available also in the Green book:

DFW – 1-hr & 1997 8-hr redesignation substitute

05/25/2016

81 FR Page 33161

Proposed Approval

Redesignation Substitute Demonstration

11/08/2016

81 FR Page 78688

Final Approval

Redesignation Substitute Demonstration

HGB – 1-hr & 8-hr redesignation substitute

10/20/2015

80 FR Page 63429

Final Approval

Clean Data Determination/Attainment Determination

10/20/2015

80 FR Page 63429

Final Approval

Redesignation Substitute Demonstration

The NNSR legacy classification for Houston went from Severe (25 TPY major source threshold & 1.3 to 1 emission offsets) to Moderate(100 TPY major source threshold & 1.15 to 1 emission offsets). The NNSR legacy classification for Dallas went from Serious (50 TPY major source threshold & 1.2 to 1 emission offsets) to Moderate(100 TPY major source threshold & 1.15 to 1 emission offsets). Per Region 6, TCEQ was holding permits until the redesignation substitutes were approved & a lot of permitting completed since then.

Should say: we are considering the implications of the court decision on these areas if the decision stands, and that the state

(TX) should discuss their concerns and possible options with their regional office.

Do not say anything more before our court filing on April 16 (update after this date)

2010 SO₂ NAAQS Area Designations

- EPA revised **Primary NAAQS for Sulfur Dioxide (SO₂) standard** on June 3, 2010 to 75 ppb/1-hour (75 FR 35520)
- EPA is completing area designations in four separate Rounds:
 - Round 1 – July 25, 2013: EPA designated 29 areas as nonattainment (effective September 12, 2013)
 - SIP submittal date: April 4, 2015
 - Attainment date: October 4, 2018
 - FFS issued: April 18, 2016
 - Number of areas issued FFS: 16 areas in 11 states
 - Mandatory sanctions (can be avoided by submitting a complete SIP)
 - First sanction: 2:1 Emissions Offset for NNSR: October 18, 2017
 - Second sanction: Highway funds: April 18, 2018
 - FIP obligation: April 18, 2018 (24 months after effective date of FFS)
 - Currently, EPA remains subject to FIP obligations for 13 of the 16 FFS areas

Larry 3/23

The FIP clock is not stopped by a completeness finding, but only by EPA fully approving a SIP for the affected area(s)

2010 SO₂ NAAQS Area Designations (con't)

- Round 2 — July and December 2016: EPA finalized designations for 65 areas including 7 nonattainment areas, 41 unclassifiable/attainment areas, and 17 unclassifiable areas
 - * Number of nonattainment areas designated on **July 12, 2016: 4**
 - Effective date of designations: **September 12, 2016**
 - SIP submittal date: **March 12, 2018**
 - Attainment date: **September 12, 2021**
 - * Number of nonattainment areas designated on **December 13, 2016: 3**
 - Effective date of designations: **January 12, 2017**
 - SIP submittal date **July 12, 2018**
 - Attainment date: **January 12, 2022**



Etchell 3/27

Round 2

In the first action, the EPA finalized designations for 61 areas, on July 12, 2016. The effective date for these designations was September 12, 2016. There were 4 nonattainment areas designated in this action, and their attainment SIP due date is March 12, 2018.

In a supplemental action, on November 29, 2016, the EPA finalized designations for 4 additional areas in Texas where the court ordered deadline was extended for these areas. The effective date of these designations was January 12, 2017. There were 3 nonattainment areas in this action, and the attainment SIP due date is July 12, 2018.

EPA received several petitions in response to Round 2 on a variety of area-specific designations (listed above). Most of the petitions are consolidated in the DC Circuit but the Texas petitions are also duplicated in the Fifth Circuit.

We are working with OAR, OGC and the Regions to determine the appropriate response for each petition.

There are pending administrative petitions from Sierra Club (areas in MO, OH, IN, TX); Masias, et al (CO); Kansas City Board of Public Utilities (KS); Southern Illinois Power Cooperative (IL); Luminant (TX); and the Texas Commission on Environmental Quality (TX).

2010 SO₂ NAAQS Area Designations (con't)

- Round 3 – December 21, 2017: EPA designated all remaining areas of the country except Round 4 areas
 - Included 6 nonattainment areas, 23 unclassifiable areas, and the remainder of the country in all states, territories, and tribes designated attainment/unclassifiable (except Round 4 areas)
 - The effective date of the designations is April 9, 2018
 - SIP submittal date: October 9, 2019
 - Attainment date: April 9, 2023
 - EPA is issuing a supplemental notice before April 9, 2018, to account for new information regarding 2017 air quality, as applicable
- Round 4 – by December 30, 2020: EPA will designate approximately 50 remaining areas by the consent decree deadline
 - Monitoring is underway in states that timely sited monitors consistent with the SO₂ Data Requirements Rule

Scott 3/9

Round 3:

On August 22, 2017, EPA responded to Governors' recommendations for designations in "120-day" letters. These responses included identification of 107 unclassifiable/attainment areas, 36 unclassifiable areas, and 11 potential nonattainment areas.

EPA finalized the Round 3 designations on December 21, 2017, for all remaining areas of the country excepting approximately 50 areas to be designated in Round 4.

In these Round 3 designations, the EPA designated 6 areas as nonattainment and 23 areas as unclassifiable. All remaining areas except Round 4 areas were designated as Attainment/Unclassifiable. For the 6 NA areas, plans are due October 2019.

Citrus Co FL would be finalized as "attainment/unclassifiable" rather than "unclassifiable" because 2017 monitor data and associated modeling show no violations.

Round 4

Early indications are that several sites are showing violations of the NAAQS. EPA will consider whether to designate these areas nonattainment before the CD deadline.

Total Nonattainment areas for Rounds 1, 2, and 3 = 42 (29+7+6)

Progress on 2010 SO₂ NAAQS Attainment

(as of March 2018)

	Round 1	Round 2	Round 3
Initial Nonattainment Areas	29	7	6
Areas Redesignated to Attainment	2	0	0
Current Nonattainment Areas	27	7	6
Clean Data Determinations	1	0	0



PM_{2.5} NAAQS Implementation Guidance

- PM_{2.5} NAAQS SIP Requirements Rule finalized on August 24, 2016 (81 FR 58010)
 - Provides framework for planning requirements for all current and future PM_{2.5} NAAQS
 - One district filed suit claiming that EPA erred by requiring that emissions reductions for RFP come from sources within the nonattainment area
 - This challenge was dismissed following the court's decision in favor of the EPA for the similar issue in the 2008 Ozone Implementation Rule litigation
- EPA issued draft PM_{2.5} Precursor Demonstration Guidance in November 2016
 - Recommends technical approaches for precursor demonstrations to assess whether air quality impact from a particular precursor can be considered insignificant in a given area
 - EPA is considering comments and intends to finalize guidance in 2018
 - States have been submitting and EPA has taken or is considering action on precursor demonstrations that states have developed using the draft guidance



SLPG/Ling 3/9

Consistent with CAA section 189(e), the rule allows states to submit optional precursor demonstrations to show that emissions of a particular precursor do "not contribute significantly to PM_{2.5} levels which exceed the standard in the area."

If a precursor demonstration is approved for a particular nonattainment area, the attainment plan and/or NNSR program may exclude the precursor from certain control requirements, depending on the type of demonstration provided.

This guidance does not affect the precursor policies for PSD.

AQAD is leading development of PM_{2.5} Precursor Demonstration Guidance.

EPA approved precursor demonstrations for Oakridge, OR and is evaluating several more.

2006 PM_{2.5} NAAQS Implementation

- Nonattainment area status:
 - Determinations of attainment by the attainment date for 7 areas (final action in May 2017)
 - Reclassification to Serious for 3 areas (final action in May 2017)
 - Moderate area attainment date extensions to December 31, 2017 for the Logan, UT-ID nonattainment area (final action in August 2017)
- Serious area attainment date is December 31, 2019
 - Extension of up to five years is possible if the area demonstrates attainment by 2019 is impracticable, adopts Most Stringent Measures and meets other requirements
- EPA will continue to work with states developing Serious area plans to address air quality challenges



SLPG/Ling 3/9

EPA finalized determinations that the following seven areas attained the 2006 24-Hour PM_{2.5} NAAQS by the December 31, 2015 attainment date based on 2013-2015 air quality data: Chico, CA; Imperial County, CA; Knoxville-Sevierville-La Follette, TN; Liberty-Clairton, PA; Nogales, AZ; Sacramento, CA; and San Francisco Bay Area, CA

In the final May 2017 action, EPA finalized reclassifications from moderate to serious for 3 areas (Fairbanks, Provo and SLC).

2006 reclass - Serious area SIPS are due December 31, 2017 for those areas reclassified from "Moderate" to "Serious."

2012 PM_{2.5} NAAQS Implementation

- EPA revised the PM_{2.5} NAAQS primary annual PM_{2.5} standard to 12µg/m³ on December 14, 2012 (78 FR 3086)
 - * Nine Moderate nonattainment areas were designated in April 2015
 - * Moderate area attainment plan due date - October 2016
 - * Moderate area attainment date - December 31, 2021
- On December 20, 2017, the Center for Biological Diversity, Center for Environmental Health and the Clean Air Council filed a complaint for EPA's alleged failure to make a finding of failure to submit attainment plan revisions for certain nonattainment areas for the 2012 PM_{2.5} NAAQS
 - * On March 26, 2018, issued findings that three states failed to submit required attainment plan revisions for five nonattainment areas



SLPG revised 3/27

2012 PM_{2.5} Moderate nonattainment areas designated in 2015:

San Joaquin Valley, CA
 Plumas county, CA (SIP submitted)
 Cleveland, OH (SIP submitted)
 South Coast, CA (SIP submitted)
 Imperial county, CA
 West Silver Valley, ID
 Allegheny, PA
 Delaware county, PA (Clean data determination, effective March 2017)
 Lebanon county, PA (Clean data determination, effective April 5, 2018)

The complaint alleges that EPA failed to make a finding of failure to submit one or more SIP elements for the areas bolded in the above list.

Nonattainment areas listed in the finding of failure to submit:

State	2012 PM _{2.5} NAAQS Moderate Nonattainment Area
California	Imperial County

Idaho	West Silver Valley
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Pennsylvania	Allegheny County
Delaware County	
Lebanon County	

Progress on PM_{2.5} NAAQS Attainment

(as of March 2018)

	1997 PM _{2.5} (2005 Designations)	2006 PM _{2.5} (2009 Designations)	2012 PM _{2.5} (2015 Designations)
Initial Nonattainment Areas	39	32	9
Areas Redesignated to Attainment	34	17	0
Current Nonattainment Areas	5	15	9
Clean Data Determinations	4	9	2
Proposed Redesignations	0	0	0



SLPG/Ling 3/9

For 2012 PM_{2.5} NAAQS, only 1 of the CDD's has published (Delaware County, PA). The Lebanon County, PA final CDD was signed on 2/15/18 and should publish the week of 3/5/18.

Remaining nonattainment areas by PM_{2.5} NAAQS:

1997 PM_{2.5} NAAQS –

SERIOUS

San Joaquin Valley, CA

CDD

Libby, MT

Liberty-Clairton, PA

Los Angeles-South Coast Air Basin, CA

St. Louis, MO-IL

2006 PM_{2.5} NAAQS –

SERIOUS

Fairbanks, AK

Los Angeles-South Coast Air Basin, CA

Provo, UT

Salt Lake City, UT

San Joaquin Valley, CA

MODERATE

Logan, UT-ID (received two 1 year extensions)

CDD

Chico, CA

Imperial Co, CA

Klamath Falls, OR

Liberty-Clairton, PA

Nogales, AZ

Oakridge, OR

Sacramento, CA

San Francisco Bay Area, CA

West Central Pinal, AZ

2012 PM2.5 NAAQS –
MODERATE

Cleveland, OH

Delaware County, PA

Imperial County, CA

Los Angeles-South Coast Air Basin, CA

Plumas County, CA

San Joaquin Valley, CA

West Silver Valley, ID

CDD

Allegheny County, PA

Lebanon County, PA

2016 Exceptional Events Rule Implementation

- Since finalizing the 2016 rule, EPA has concurred on ozone demonstrations for CT, MA, MD, NJ, RI, TX, Ute Tribe (Utah), and Washoe County (Nevada)
- We remain focused on continuous improvement by engaging with stakeholders, addressing concerns, and streamlining the process
- We are hopeful that many of the things we are already doing or working to implement under the revised rule are addressing existing concerns such as ensuring timely review processes, right-sizing demonstrations, fostering national consistency, and providing additional resources like updated FAQs and technical guidance documents



GSG/Vera 3/9

All concurred ozone demonstrations under the new rule have been related to wildfire events, except for the Ute Tribe demonstration, which was for stratospheric ozone intrusion.

If asked about pending EE ozone demos: One ozone demonstration in the review process from PA (attainment / nonattainment for two areas) and one anticipated ozone demonstration from Louisiana (attainment / nonattainment for Baton Rouge) are expected to have implications for 2015 ozone designations. STATUS COULD CHANGE BY APRIL

General Exceptional Events Rule Background

Establishes procedures and criteria for identifying and evaluating air quality monitoring data affected by exceptional events

Provides a mechanism by which air quality data can be excluded from regulatory decisions and actions

Applies to all criteria pollutants and NAAQS and all event types to which the rule applies

Applies to all state air agencies, to (delegated) local air agencies, to tribal air agencies that operate air quality monitors that produce regulatory data and to federal land managers/federal agencies if agreed by the state

Affects design value calculations, NAAQS designation decisions, attainment determinations, and State/Tribal/Federal Implementation Plan (SIP/FIP/TIP) development

Exceptional Events: Additional Resources and Engagement to Improve the Process

- EPA resources now available online – Google “EPA Exceptional Events”
 - * Wildfire-Ozone Guidance
 - * 2007-to-2016 Rule Crosswalk
 - * Best Practices for Multi-State Exceptional Events Demonstrations
 - * Mitigation Plan Checklist
 - * Example Demonstrations
- Additional implementation documents planned for this year
 - * Updated FAQs
 - * Updated High Winds
 - * Stratospheric Ozone Intrusion
 - * Prescribed Fire-Ozone
 - * Alternate Paths for Data Exclusion
- Stakeholder engagement – National calls on Alternate Paths and Mitigation Plans
- EPA developing national electronic tracking system for exceptional events (similar to SPeCS for SIPs)



GSG/Vera 3/9

NOTE: ENGAGEMENT INFO MAY NEED TO BE UPDATED/REVISED.

The development and release of planned documents depends, in part, on stakeholder interest in the documents and the required review process (such as whether OMB review is required).

“Alternate paths” is the term we are using to describe possible opportunities for data exclusion outside the scope of the Exceptional Events Rule, such as:

Preparing required air quality analyses in Prevention of Significant Deterioration (PSD) permit applications
Predicting future attainment for SIP attainment demonstrations

The 2016 revised rule identified initial areas that require exceptional events mitigation plans – the plans are due to EPA by September 30, 2018.

States are able to rely on other state planning documents/resources to fulfill like requirements for mitigation plans. Your EPA Regional offices will be able to work with you on fulfilling the requirements for mitigation plans.

EPA will only review these plans for completeness with respect to the required elements; we will not be conducting a full review. We will be having a national call/webinar for stakeholders on April 16 to provide interested air agencies with more information about mitigation plans.

We will also post any early example mitigation plans on EPA’s exceptional events website once they are completed.

ASK:

If there are other types of resources that air agencies would find useful, please let us know. We are eager to work with you to ensure we realize all of the intended streamlining and efficiency benefits of the revised EE Rule.

Continued Emphasis on Early and Frequent Communication

- The 2016 Exceptional Events Rule eliminated event flagging and demonstration submission deadlines with the exception of initial area designations
 - Informational or 'I' flags are encouraged for initially flagging suspected events
 - Request exclusion or 'R' flags should be used when a demonstration will be submitted
- The new **Initial Notification Process** starts a conversation between EPA and air agencies to establish mutual expectations for "right-sizing" effort, assessing the purpose for data exclusion, and identifying what is needed for an approvable demonstration
- EPA intends to conduct initial review of demonstrations within 120 days of submission, complete review within 12 months, and defer demonstrations that do not have regulatory significance within 60 days



GSG/Vera 3/9

'Informational' flags in AQS can be used liberally by air agencies for marking data or possible events that they may want to revisit in the future.

(If asked): Informational flags will NOT count toward event recurrence for determining areas that require mitigation plans.

'Request exclusion' flags in AQS should be used by air agencies only for data or possible events for which they intend to submit an exceptional events demonstration.

(If asked): Request exclusion flags will count toward event recurrence for determining areas that require mitigation plans. More info. on mitigation plans will be provided on the next slide.

Coordinating and collaborating with your region on the purpose for which you want the data excluded is important so there can be a dialogue on what might be the most appropriate path for data exclusion. The initial notification requirement is especially important for this purpose.

Anecdotal evidence suggests we are generally meeting our intended deadlines for responses at various stages of the demonstration development and review process, but we know we haven't always hit the mark, and that is what we are striving for.

Ozone Transport

- To address interstate transport, Congress established the “good neighbor” provision [Section 110(a)(2)(D)(i)(I)], which requires upwind states to implement emission reductions if the upwind state contributes significantly to nonattainment or interferes with maintenance of the NAAQS in downwind areas
- The CAA envisions a SIP-led process; EPA is focused on a SIP first approach
- States have asked EPA for information and guidance to enable states to develop approvable and timely transport SIPs to address regional (multi-state) air quality problems
- Congress established additional CAA provisions that can be used to address interstate transport of air pollutants that are contributing to nonattainment or interfering with maintenance of NAAQS, *e.g.*:
 - Establishing provisions for creating (and as appropriate, for expanding) transport regions, specifically establishing the ozone transport region (Section 176A)
 - Providing for states to petition EPA to address sources that emit or would emit in violation of the good neighbor provision (Section 126 petitions)



GSG 3/9, ling 3/15, CAMD reviewed 3/22

I am going to touch on status of what is happening on the “good neighbor” SIPs, the pending 126 petitions and 176A in the next few slides.

Much of our current ozone transport-related activity under the 110, 126 and 176A provisions in the CAA relate to the 2008 ozone NAAQS in the northeastern U.S., but we are beginning to see activity related to the 2015 ozone NAAQS. I will provide updates in each of these areas.

2008 Ozone NAAQS: Good Neighbor Transport SIPs

- **The CSAPR Update was finalized on September 7, 2016 to address summertime interstate transport of ozone pollution for the 2008 NAAQS in the eastern U.S. by updating the CSAPR ozone season program.**
 - * The first implementation period was from May 1 – September 30, 2017
- **Outstanding good neighbor obligations for the 2008 ozone NAAQS**
 - * CSAPR Update was issued as a partial remedy for 21 eastern states (full remedy for TN).
 - AL, AR, IL, IN, IA, KS, KY, LA, MD, MI, MS, MO, NJ, NY, OH, OK, PA, TX, VA, WV, and WI
 - CSAPR Update Rule did not address 2008 transport obligations for western states
 - * There are 24 states for which EPA has not yet fully-approved a SIP and continues to have a FIP obligation.
 - Kentucky – EPA is under a court-ordered deadline of June 30, 2018 for a full FIP; however, KY is developing a state-led action that will moot EPA's FIP obligation if the action can be approved by EPA.
 - For other states, EPA has statutory FIP deadlines ranging from August 2017 to March 2019
 - On 1/17/18, NY and CT filed a joint complaint re EPA's failure to promulgate fully compliant FIPs by 8/12/17 for IL, MI, PA, VA and WV



GSG 3/9, Ling 3/15, CAMD revised 3/23

In general:

States are required to submit "good neighbor" SIPs within 3 years of promulgation of a new or revised NAAQS. For the 2008 ozone NAAQS, this was March 12, 2011.

EPA must promulgate a FIP within 2 years if EPA finds that a state does not submit a good neighbor SIP or if EPA disapproves the SIP

The court ordered deadline for the KY SIP/EPA FIP is June 30, 2018. The "24" in the slide includes the eastern 21 states plus 3 western (NM, UT and WY)

STATUTORY FIP DEADLINES – (KY is on the slide so it is not included here)

8/12/17 - AL, AR, CA, IL, IA, KS, MI, MS, MO, NM, OK, PA, VA and WV

7/15/18 - IN, OH and NJ

8/19/18 - MD

9/12/18 - LA, TX and WI

9/26/18 - NY

11/18/18 - UT

3/6/19 - WY

SIPs IN-PROCESS or RECENT FINAL ACTIONS (all approval actions - status as of 2/27/18)

AL - Final CSAPR Update SIP to replace FIP - approval published in FR 10/6/17 (82 FR 46674)

CA - Proposed approval published in FR 2/7/18 (83 FR 5375)

CT - Proposed approval drafted - in review

DC - Proposed approval drafted - in review

DE - Proposed approval and direct final approval published in FR 9/27/17; withdrew direct final due to adverse comment; working on final action

GA - Final approval published in FR 10/13/17 (82 FR 47930)

MN - Final approval published in FR 12/11/17 (82 FR 58116)

NC - Final approval published in FR 10/4/17 (82 FR 46134)

NY - NY intends to revise rules by 12/29/17 at which point EPA will propose to convert the conditional approval of the SIP revision to full approval.

SC - Final approval published in FR 10/13/17 (82 FR 47936)

HI - Region drafting proposal

PR - Region finalized action 9/2016 (EPA Internal - corrections notice needed)

WV - Final CSAPR Update SIP to replace FIP - approval published in FR 2/8/18 (83 FR 5540)

Note: TX challenged our SIP disapproval action. The court set any action aside until after we addressed the Haze FIP and SO2 Remand, which we have now done (see RH slides). We are currently working with TX to identify a path forward.

2008 Ozone NAAQS: Good Neighbor Transport SIPs (con't)

- * To help states develop, supplement or resubmit their good neighbor SIPs for the 2008 standards, EPA signed the **"Supplemental Transport Memo"** on October 27, 2017. The modeling conveyed in this memo indicated that there are no monitoring sites, outside of California, that were projected to have nonattainment or maintenance problems with respect to the 2008 ozone NAAQS of 75 ppb in 2023
- * EPA is currently developing a federal notice-and-comment rulemaking to evaluate and make a determination regarding outstanding good neighbor obligations for the 2008 ozone NAAQS, considering new information such as the October 2017 modeling. This action should appear in the Spring 2018 Regulatory Agenda. EPA will also continue working with states outside the CSAPR Update to fully approve transport SIPs for the 2008 NAAQS



EPA recognizes that States have expressed a desire for regulatory certainty when complying with CAA requirements, planning for emissions reductions and planning for attainment

While states have asked for additional information in developing SIPs, its important to note that states can use any available information to demonstrate that they are meeting their interstate transport obligations

In the fall of last year, EPA released updated modeling for 2023, which we believe will help states develop SIPs to fully address their good neighbor obligations for the 2008 ozone NAAQS.

CAMD is leading the national action to affirm the CSAPR Update as the full remedy for the 2008 NAAQS. This action would apply only to CSAPR Update states. Anticipated timing: proposal in June 2018; final in December 2018.

2015 Ozone NAAQS: Good Neighbor Transport SIPs

- Good Neighbor SIPs for the 2015 ozone NAAQS are due in October 2015
- EPA is currently preparing materials to assist states in developing fully approvable good neighbor SIPs for the 2015 ozone NAAQS
- EPA is encouraging consistency and collaboration among states linked to a common receptor and among upwind and downwind states in developing and applying a regionally consistent analytic approach



GSG 3/9/Ling 3/15

As I indicated in the previous slide, states are required to submit “good neighbor” SIPs within 3 years of promulgation of a new or revised NAAQS. For the 2015 ozone NAAQS, this will be in October 2018.

EPA is currently developing materials to assist states in developing fully approvable good neighbor SIPs for the 2015 ozone NAAQS in advance of the October 2018 deadline. We anticipate releasing information as follows:

In the next few weeks, we intend to issue a memorandum conveying modeling results and the contribution metrics for the 2015 standard. The modeling information will include the same 2023 design value information that we released with our October memorandum but will now include contribution metrics for 2015 (note: we did not include contribution metrics with the October memo, because, for 2008 (75 ppb), we indicated that there would be no nonattainment or maintenance issues in 2023).

With this memorandum (or in a separate communication), we will also release a discussion document identifying potential flexibilities that states can use in applying EPA's (or their own) modeling results within the 4 step transport framework needed to develop a SIP

We expect to hold a national outreach call in early March to discuss both the modeling results and the identified flexibilities

We expect to further engage with stakeholders during the spring meetings and/or in separate conference calls, as needed

After considering stakeholder feedback, EPA anticipates developing materials (memorandum or other) to communicate viable, identified approaches

As we move forward, we will encourage consistency and collaboration among states linked to a common receptor and among upwind and downwind states in developing and applying a regionally consistent analytic approach.

Anticipated Attainment Dates for the 2015 ozone NAAQS

On November 16, 2017 (82 FR 54232), the EPA established initial air quality designations for most areas in the United States.

On December 22, 2017 (83 FR 651), the EPA indicated the anticipated area designations for most portions of the country not designated in the November 16, 2017 action. In addition, the EPA proposed the maximum attainment dates for nonattainment areas in each classification, which for Moderate ozone nonattainment is 6 years (81 FR 81276, November 17, 2016).

The EPA expects to finalize designations for most areas by April 2018 (with an anticipated effective date in 30 – 60 days after publication in the Federal Register), 6 years from the effective date is May - June 2024.

Therefore, the 2023 ozone season would be the last full ozone season before the 2024 attainment date for Moderate areas.

Clean Air Act Section 126(b)

Petitioning State	Response Deadlines	Named EGU Sources	Ozone NAAQS Cited
CT ¹	1/25/17	Brunner Island, PA	2008
DE	3/5/17	1. Brunner Island, PA	2008 and 2015
(4 petitions)	4/7/17	2. Harrison, WV	
	7/9/17	3. Homer City, PA	
	8/3/17	4. Conemaugh, PA	
MD ²	7/15/17	36 EGUs at 19 facilities in IN, KY, OH, PA and WV	Emphasized 2008, mentioned 2015
NY	On or about 5/11/18 ³	All EGU and non-EGU sources projected to emit at least 400 tpy of NOx in 9 upwind states (IL, IN, KY, MD, MI, OH, PA, VA, WV)	2008 and 2015

¹On February 7, 2018, in response to a May 16, 2017, CT-filed, mandatory duty suit, the U.S. District Court in Connecticut ordered the EPA to sign a final action on the CT petition within 60 days, or by April 8, 2018. The EPA proposed to deny this petition on February 22, 2018.

²On September 27, 2017, MD and several environmental groups filed suit for EPA's failure to respond to MD's 126 petition.

³Petition dated 3/12/18. 60 days from petition date is 5/11/18. EPA expects to pursue a 6 month extension as allowed by the CAA, but has not yet done so.



GSG 3/9, Ling 3/15, Palma 3/16

Section 126 – Allows states to petition EPA for a finding that a major source or group of sources emits or would emit any pollutant in amounts that violate the good neighbor provision.

The EPA has seven pending and active Section 126 petitions on ozone from four states (CT, DE, MD, NY), each claiming violations of the Good Neighbor Provision by one or more specific power plants (EGUs) in named upwind states. In the recently-received NY petition, NY claims that all EGU and non-EGU sources projected to emit at least 400 tpy of NOx in 2017 in 9 named upwind states collectively contribute to NA/maintenance in NY.

The petitioners' main argument is that coal-fired EGUs (or identified non-EGUs, for NY) either lack post-combustion NOx controls (e.g., Brunner Island in PA), or have operated post-combustion NOx controls (i.e., SCR or SNCR) sub-optimally, and that emissions from those EGUs impact other states in violation of the Good Neighbor Provision.

The petitioners also argue or imply that seasonal emission limits such as those in the currently-applicable Good Neighbor FIPs are inadequate to prevent EGU NOx emissions peaking on high-ozone days.

EPA missed the statutory response deadlines associated with these petitions. CT has filed a petition for review, MD filed suit on 9/27/17, DE and several environmental groups filed NOIs.

The CAA allows 60 days from receipt to respond to 126 petitions, but allows EPA to grant itself a 6 month extension, if needed. 60 days from the date of the NY petition is 5/11/18 (this may change slightly based on the date received by the Administrator). EPA expects a 6 month extension, but has not yet filed this action.

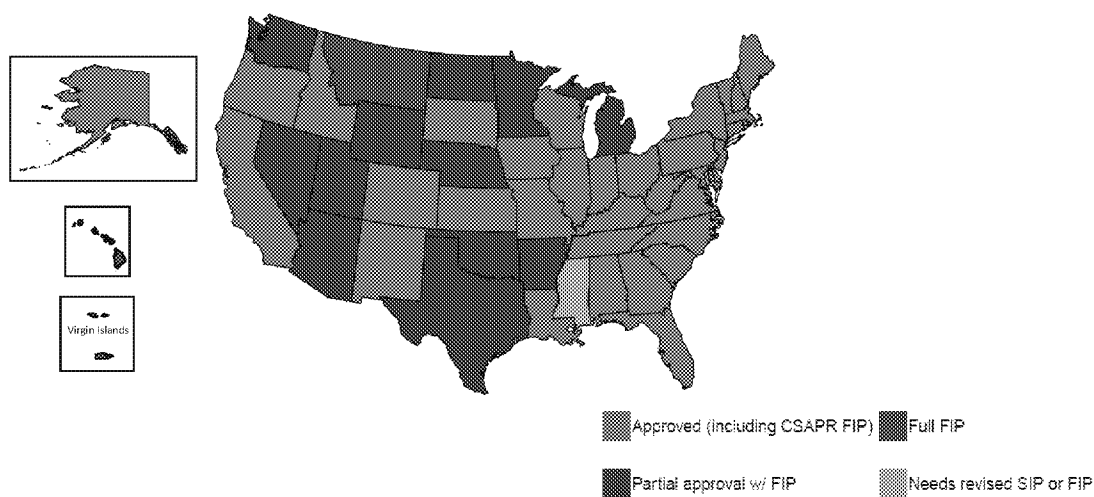
On February 7, 2018, (in response to the 5/16/17 mandatory duty suit filed by CT), the US District Court (District of Connecticut) issued a summary judgment that EPA issue a final action on the CT petition within 60 days (by April 8, 2018, which is effectively April 6 because 4/8 is a Sunday). We were also ordered to have a public hearing within 30 days of the order. We held a public hearing on February 23 in DC to meet the APA requirements of 15 days' notice in advance of the hearing and 30 days following the hearing.

Peter T. signed the notice of public hearing on February 9, which EPA immediately posted on our website. The FR notice published on 2/14/18 (83 FR 6490)

The Administrator signed the proposed action denying CT's petition on February 15, 2018. This action published in the FR on 2/22/2018 (83 FR 7710)

The comment period closes on March 26, 2018.

Regional Haze: Status of Actions from First Implementation Period



Melinda 3/23 and 3/28

Nearly all states have complete plans in place covering the first regional haze planning period. EPA is working with states on SIP revisions as needed, but there are outstanding obligations resulting from incomplete plans and/or litigation outcomes in a few states. Litigation remains ongoing in a number of states as well.

Overview of First Planning Period SIP Actions

EPA has taken complete action on most of the required 52 plans: 36 approvals (some including CSAPR>BART FIP), 12 partial approvals, and 3 full FIPs. 1 state is still working to get a complete plan in place.

However, there remain a number of plans still under some level of review either due to ongoing litigation (8 plans), remand responses (6) or incomplete plans (1, in orange above).

Additionally, some states may be working to replace the CSAPR>BART FIP or other FIP with a SIP (these aren't indicated on the map).

Recent and outstanding actions (DO NOT SAY, FYI ONLY)

In AL, last fall we published final approval of a SIP relying on CSAPR>BART.

In TX, last fall we published a final FIP to partially address Texas' haze obligations; RP/LTS piece remains outstanding.

In LA, we recently took final action for approval of a SIP; CD deadline to take final action was in December 2017.

In AR, we recently took final action to approve a SIP to partially replace the partial FIP. (February 2018).

In NY, we recently fully approved the SIP and removed the previous FIP provisions. (February 2018).

In MS, we are awaiting a new SIP to respond to past disapprovals (which related to CAIR).

Litigation - AR, MI, MN, NY, UT, WY, TX, LA

- Pertain to a mix of issues related to SIP disapprovals

EPA working closely with states and our priority is getting states to the place where they have approvable SIPs.

In NY, we expect the recent SIP approval to resolve the litigation.

Progress Reports: EPA continues to take action on regional haze progress reports.

Summary of Progress Reports Status as of 2/13/2018

EPA continues to take action on regional haze progress reports (due dates range from 2012 to 2017, depending on when state submitted initial SIPs):

23 final approvals (NC, IA, TN, WV, DE, CA, MO, RI, KS, NV, NH, FL, VA, DC, VT, GA, NY, NJ, NM, ME, SC, KY, IN)

6 between proposal and final approval, or direct finals withdrawn (AK, MN, MI, OH, IL, WI)

12 awaiting EPA action (AR, UT, TX, CT, OK, ND, ID, SD, AZ, CO, NE, MD)

11 outstanding to EPA (LA, AL, MS, WY, PA, OR, WA, MA, MT, HI, VI)

CSAPR-better-than-BART

Recent Court Opinion:

- The D.C. Circuit recently (March 20, 2018) issued an opinion upholding EPA's 2012 CSAPR-better-than-BART rulemaking. This opinion also upheld EPA's disapprovals of several SIPs that relied on CAIR
 - The litigation in this case was in abeyance for several years while litigation on CSAPR played out
 - CSAPR-better-than-BART is currently used in regional haze plans for nineteen states

CSAPR-better-than-BART reaffirmation:

- In September 2017, EPA reaffirmed that CSAPR remains better-than-BART despite some changes to the CSAPR trading programs
- EPA received petitions for review and reconsideration on the reaffirmation rulemaking; no updates on next steps or schedule



[Melinda created 3/23]

FYI, the nineteen states are: Alabama, Arkansas, Georgia, Indiana, Iowa, Kentucky, Louisiana, Michigan, Missouri, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, Nebraska, Minnesota, and Wisconsin rely on CSAPR participation as BART, either via FIP or SIP.

FYI, the changes to CSAPR included 1- the removal of Texas from the PM trading program and 2- changes to several states NOx budgets via the CSAPR Update.

Regional Haze: Second Implementation Period

- EPA is already working with states and groups of states on the second planning period
- Key principles for implementation of the second planning period include:
 - Ensuring that states have the information they need to develop approvable regional haze plans
 - Ensuring that states have discretion and flexibility to select sources for reasonable progress analysis
 - Ensuring that we are on a path that enables compliance with the Clean Air Act, improved visibility in Class I areas, and state discretion regarding whether and how to control sources of visibility-impairing pollutants



Melinda/Vera 3/9

If asked (and if Chet is unavailable to respond):

In October 2017, OAQPS' modeling group released preliminary, future-year (2028) visibility projections. This work included sector-specific source apportionment to help understand visibility impairment at Class I areas.

These results may be helpful to some states, particularly for areas where model performance was good and uncertainty was low (most eastern Class I areas).

EPA's SCRAM website has the details on this work, including the TSD (<https://www.epa.gov/scram>).

For questions on this work or its applicability, please contact Chet's folks.

Regional Haze Rule and Guidance Updates

- **Rule revisions were finalized on January 10, 2017 (82 FR 3078):**
 - Petitions for review were filed in the D.C. Circuit as well as petitions for reconsideration
 - On January 17, 2018, EPA announced its decision to revisit aspects of the 2017 rule revisions:
 - “EPA intends to commence a notice-and-comment rulemaking in which we will address portions of the rule, including but not limited to the Reasonably Attributable Visibility Impairment (RAVI) provisions, the provisions regarding Federal Land Manager (FLM) consultation, and any other elements of the rule we may identify for additional consideration. Furthermore, EPA plans to finalize one or more EPA guidance documents for regional haze State Implementation Plan (SIP) revisions due in 2021. Such guidance may also address some or all of the issues raised in the petitions for reconsideration.”
 - EPA asked the D.C. Circuit to place the litigation into abeyance “pending administrative proceedings that may result in changes or clarifications to the challenged rule and thereby potentially narrow the scope of this litigation;” motion granted January 30, 2018
- **On July 8, 2016 (81 FR 44608), EPA released draft guidance**
 - Next steps on guidance are expected to be developed as EPA initiates regulatory review of the 2017 rule revisions



Melinda/Vera 3/9

Litigation

Now in abeyance as of January 30, 2018 pending the outcome of the revisitation (not a formal reconsideration because we neither granted nor denied any of the petitions for reconsideration, per letters sent January 17 to the petitioners). EPA must file status reports with the Court at 90-day intervals beginning April 30, 2018.

We have no public schedule to announce at this time for the rulemaking.

A total of 11 Petitions for Review were filed with the D.C. Circuit:

State of Alaska; UARG; Chamber of Commerce; National Parks Conservation Association (on behalf of several conservation groups); State of Arkansas; State of North Dakota; State of Texas; NorthWestern Corp.; Entergy; Luminant; and Southwestern Public Service Company.

In addition, 3 Petitions for Reconsideration were received:

UARG, State of Alaska, and a joint petition from Southwestern Public Service Company, Entergy Services, and Cleco Power.

Primary issues raised included:

consideration of international emissions;

the idea that uniform rate of progress may be considered a “safe harbor” in the reasonable progress evaluation;

the order of analysis of the long term strategy and the reasonable progress goals; and

the reasonably attributable visibility impairment program.

We are also reviewing the 2016 draft guidance document with an eye toward how a final guidance document may help address the concerns raised in the petitions.

SSM SIP Call Under Policy Review

- Final SSM SIP Action of 2015 concerned SIP provisions for treatment of excess emissions occurring during periods of startup, shutdown and malfunction (SSM)
 - Restated EPA's SSM Policy as it applied to SIPs with one change regarding affirmative defense (AD) provisions
 - Included SSM SIP Call that applied to 36 states (45 jurisdictions)
- Judicial review of the SSM Action is pending before the D.C. Circuit, but case is currently being held in abeyance to allow for review by the new administration



Juan 3/15

Challenges to the SSM Action are pending before the D.C. Circuit in Case No. 15-1239 (and consolidated cases) captioned Environmental Committee of the Florida Electric Power Coordinating Group, Inc. v. EPA (formerly captioned Walter Coke, Inc. v. EPA, Case No. 15-1166).

Although the court is holding this case in abeyance, neither the court nor EPA has stayed the SSM Action. SIPs are due on November 29, 2017.

EPA stated in its' 90-day status report filed with the court on 7/24/17 that EPA is "continuing to review the SSM Action to determine whether the Agency will reconsider all or part of the SSM Action, and/or grant the pending petitions for reconsideration in whole or in part."

Generally, EPA is not taking action with respect to any SSM-related SIP provisions until the Administrator's Office has completed its full review of the SSM Action. Thus, all SIP actions that concern SSM provisions are considered "on hold until further notice."

Once the Administrator has completed its review, EPA Regional Offices will be advised as to how to act on SSM-related SIP submissions.

Example "emergency" issue...in case asked about EPA's CD deadline on Delaware's RACT SIP:

We recognize that the latest direction—to keep SSM-related SIP actions "on hold"—contributes to other problems for certain states, even for EPA itself.

E.g., under terms of a Consent Decree, a deadline was approaching by which EPA must act on a Delaware RACT SIP submission (which happens to include revised SSM provisions).

In Aug 2017, EPA asked a District Court for permission to delay action on the SIP until EPA completes its full policy review of the SSM Action.

The court, however, denied EPA's request, instead giving EPA just 90 days to finalize action on the SIP.

Submissions made. As of Aug 2017, EPA has:

Received submissions from 29 of the 45 SIP jurisdictions (among 25 of the 36 states SIP-called).

Approved a corrective SIP revision for Tennessee's Knox County AQMD (final rule published 12/16/2016 at 81 FR 91033).

Proposed approval for another 5 SIP jurisdictions, most recently through notice published 5/1/17.

NSR Improvements and Other Recent Actions

- Actual-to-Projected-Actual Applicability Test Guidance Memorandum
- Project Emissions Accounting Memo
- Project Emissions Accounting Rulemaking
- Source Aggregation Guidance
- Project Aggregation Reconsideration
- Ambient Air Guidance
- Rulemaking on Treatment of Biomass for Permitting
- PM_{2.5} and Ozone SILs Guidance
- Routine Maintenance, Repair and Replacement (RMRR)
- Once-In-Always-In

Juan 3/15

Specifics on each action is provided in the following slides.

NSR Updates: Actual-to-Projected-Actual Applicability Test Guidance Memorandum

- **Memorandum: “New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected-Actual Applicability Test in Determining Major Modification Applicability”** signed by Administrator Pruitt on December 7, 2017
 - * Available at https://www.epa.gov/sites/production/files/2017-12/documents/policy_memo.12.7.17.pdf
 - * Where a source projects an insignificant emissions increase, the level of actual emissions after the project governs applicability
 - * Projections may reflect the intent to actively manage post-project operations in order to prevent a significant emissions increase from occurring
 - * EPA will not second guess NSR applicability analyses that comply with the procedural requirements of the regulations



NSRG 3/9, Juan 3/15, Raj 3/27

3rd sub-bullet: The memo states a source may actually intend “to actively manage emissions and that is consistent with our regs.”

The last paragraph of the memo reaffirms that state and local regulations approved by EPA into the SIP are the governing federal law. Those regulations must be at least as stringent as the federal rule requirements in 40 CFR 51.165 / 51.166, but may be more stringent. If it is determined that a SIP NSR program is deficient, EPA has the authority to call for the state to revise its regulations.

NOTE from Raj: The message here is contentious – yes states can be more stringent, but if they are we could do a SIP call.

Project Emissions Accounting (Project Netting) Guidance Memorandum

- **Memorandum: “Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program”** signed by Administrator on March 13, 2018
 - * Available at <https://www.epa.gov/nsr>
 - * Communicates EPA’s interpretation that the current NSR regulations provide that emissions decreases as well as increases are to be considered at Step 1 of the NSR applicability process, i.e., determining whether a project will result in a significant emissions increase
 - * Interpretation is grounded in the principle that the plain language of the CAA indicates that Congress intended to apply NSR to changes that increase actual emissions and the language in the corresponding NSR regulations is consistent with that intent
- Prior EPA guidance had indicated that the relevant provisions of the NSR regulations preclude the consideration of emissions decreases at Step 1
 - * For the reasons discussed in the memo, EPA will no longer apply such interpretation



NSRG 3/9/ Juan 3/15

Under EPA regulations, the process for determining whether a project at an existing major stationary source triggers the requirement to obtain an NSR permit is a two-step process.

Step 1 involves the determination of whether a proposed project will, by itself, result in a significant emissions increase.

Step 2 involves an evaluation of whether the project will result in a significant net emissions increase, considering any other increases and decreases in actual emissions at the source that are contemporaneous and otherwise creditable. EPA has generally referred to Step 2 as “netting” or “contemporaneous netting.”

To qualify as a “major modification,” a project must result in both a significant emissions increase (Step 1) and a significant net emissions increase (Step 2).

EPA previously referred to the consideration of emissions decreases in Step 1 as “project netting.”

Past EPA statements and guidance has been inconsistent as to whether, and to what extent project netting was permitted.

In 2006, EPA proposed regulatory changes to make clear that project netting is permitted for all project categories.

Project Emissions Accounting (PEA) Proposed Rule

- EPA published on March 30, 2018, the **Issuance of Guidance Memorandum, “PEA Under the New Source Review Preconstruction Permitting Program”**
- As discussed in the memo, this clarification will apply to all project categories (including existing units only, new units only, and new and existing units)
 - Memo can be found at <https://www.epa.gov/nsr/project-emissions-accounting>
- A proposal will codify the considerations and interpretations reflected in the memorandum
 - Current schedule: Fall 2018



Juan 3/15; updated 3/29

Under the New Source Review (NSR) pre-construction permitting program, sources undergoing modifications need to determine whether their modification is considered a major modification and thus subject to NSR pre-construction permitting.

A source owner determines if its source is undergoing a major modification under NSR using a two-step applicability test. The first step is to determine if there is a “significant emission increase” of a regulated NSR pollutant from the proposed modification (Step 1) and the second step is to determine if there is a “significant net emission increase” of that pollutant (Step 2).

In this action, we are clarifying how to consider emissions increases and decreases from a modification in Step 1 of the NSR major modification applicability test for all unit types (i.e., new, existing, and hybrid units).

Source Aggregation

- EPA defines “stationary source” in the permitting programs as all of the pollutant-emitting activities that are:
 - * located on one or more contiguous or adjacent properties *and*
 - * are under common control of one person (or persons under common control), *and*
 - * belong to the same major industrial grouping (2 digit SIC code)[40 CFR 70.2 and 52.21(b)(1) and (5)]
- EPA’s interpretation of “adjacent” has evolved through source-specific determinations
 - * 2016 Rulemaking clarified “adjacent” for oil and gas operations
 - Adjacent operations are limited to those within ¼ mile with shared equipment
- EPA’s determinations of whether “common control” exists have been based on an assessment of multiple factors
 - * We are evaluating whether/how to further refine the factors that must be assessed
- EPA intends to address “adjacent” and “common control” in upcoming actions



This is still premature – what you can say depends on whether we have spoken publicly by the time of the meeting.

Common Control – the direction we have been given – Meadowbrook letter is the reference, if public by the time of the meeting “Control” should be limited to actual control over a meaningful portion of operations relevant to air pollution; in other words, the ability to direct decisions that could impact the applicability of or compliance with relevant regulatory requirements.

It is unlikely that we will have said anything about adjacent by the time of the meetings, but based guidance received so far:

Adjacent is limited to proximity
No consideration of functional interrelatedness

4th bullet:

In terms of upcoming actions, could be in form of either case-by-case interpretations or other guidance documents.

Project Aggregation Reconsideration

- 2009 Rule for Project Aggregation
 - Established “substantially related” criterion for aggregating projects, and a 3-year rebuttable presumption against aggregating
 - Did not amend the CFR text (definition of “project”), considered an interpretive rule
 - Calling it a “new interpretation” of the rule text, it only applies prospectively
- Reconsideration and Stay of the 2009 Rule
 - NRDC petitioned for reconsideration and sued EPA on the 2009 Rule
 - EPA granted reconsideration and stayed the effectiveness of the 2009 Rule pending completion of the reconsideration or litigation
 - In 2010, EPA proposed reconsideration with a preference to revoke 2009 Rule
- Current Action – Final Reconsideration Rule
 - Current schedule: Summer 2018



Juan 3/15

Planned Current Action

Retains the 2009 Rule without amending the rule text or the 2009 interpretation.

Addresses notice and comment deficiencies and responds to other issues raised by NRDC.

Lifts the stay of the 2009 Rule, making the rule effective.

Ambient Air Guidance

- EPA defines *“ambient air”* as *“that portion of the atmosphere, external to buildings, to which the general public has access”* (40 CFR 50.1(e))
 - EPA’s longstanding policy for implementing ambient air for PSD purposes was stated in a 1980 Costle letter, *“the atmosphere over land that is owned or controlled by the source and to which public access is precluded by a fence or other physical barriers”*
 - Subsequent guidance provided over the years by EPA to recommend how to apply 1980 policy statement for specific situations
- We are evaluating several key terms associated with the definition including: *“general public”*, *“access”* and *“building”* to determine where additional flexibility may be appropriate
- EPA is anticipating issuing guidance in Spring 2018



Juan 3/15

This was part of what was raised in comments to the Department of Commerce.

Treatment of Biogenic CO₂ Emissions in Permitting

- On February 13, 2018, EPA issued a response to New Hampshire reflecting its current views on the programmatic treatment of biomass
- In this letter, EPA clarifies, among other things, that:
 - * The Consolidated Appropriations Act of 2017 urges the proactive recognition of forest biomass as being both carbon neutral and a source of renewable energy
 - * Spurred by this congressional action, EPA is engaged in a multi-agency effort with DOE and USDA to establish a mechanism for federal cooperation and consistency on the use of biomass for energy throughout the federal government
 - * EPA will be developing a set of options consistent with the carbon neutral policy of biomass from forests and other lands sectors to provide certainty for the treatment of biomass throughout the Agency's permitting decisions
- Letter at: <https://www.epa.gov/air-and-radiation/policy-update-epa-programmatic-treatment-biomass-and-forest-products-industry>



NSRG/Juan 3/15

Administrator Pruitt issued a letter to Governor Sununu of New Hampshire, outlining EPA's work to advance and promote the responsible use of forest resources (we did not see the incoming letter so not sure who it actually came from).

Appropriations Act Text: Sec. 428. To support the key role that forests in the US can play in addressing the energy needs of the US, the Secretary of Energy, the Secretary of Agriculture, and the Administrator of the EPA shall consistent with their missions jointly:

Ensure that Federal policy relating to forest bioenergy:

(A) Is consistent across all Federal departments and agencies; and

(B) Recognize the full benefits of the use of forest biomass for energy, conservation, and responsible forest management; and Establish clear and simple policies for the use of forest biomass as an energy solution including policies that:

(A) Reflect the carbon-neutrality of forest bioenergy and recognize biomass as a renewable energy source, provided the use of forest biomass for energy production does not cause conversion of forests to non-forest use.

(B) Encourage private investment throughout the forest biomass supply chain including in: (i) Working forests; (ii) Harvesting operations; (iii) Forest improvement operations; (iv) Forest bioenergy production; (v) Wood products manufacturing; or (vi) Paper manufacturing;

(C) Encourage forest management to improve forest health; and

(D) Recognize State initiatives to produce and use forest biomass.

Expect action on the policy in the near future.

Possible regulatory actions specific to the application of the policy to the permitting programs will follow.

PM_{2.5} and Ozone SILs Guidance

- EPA is developing both a revised PM_{2.5} SIL and new ozone SIL for permittees to use in streamlining the air dispersion modeling permitting process
- The guidance will be comprised of a policy memorandum, a technical document and legal support document
 - All three are intended to be referenced and included in any permit record where the recommended SILs are used by a permitting authority
 - The guidance is not a final agency action and is not binding for industry, permitting authorities, or the public
- An informal public comment was accomplished in 2016
- The guidance is currently under OMB review
- Projected signature of guidance - Spring 2018



NSRG 3/9/ Juan 3/15

NOTE – if signature occurs update slide

Routine Maintenance, Repair and Replacement

- EPA believes there is uncertainty regarding the Routine Maintenance, Repair and Replacement (RMRR) exclusion from “major modification” applicability
- EPA is evaluating the need to clarify the interpretation and appropriate application of the RMRR exclusion under the NSR regulations
- EPA anticipates clarification in Spring 2018



Peter K 3/27, Harlow 3/28

Policy could clarify that:

EPA will evaluate the nature and extent, purpose, frequency and cost of the proposed activities and other relevant factors in the context of the industry category to reach a common-sense finding consistent with the original intent under the regulations and WEPCO.

RMRR may include activities that involve operational improvement to an emissions unit such as efficiency and reliability, if those activities are found to be routine within the industry.

Once a proposed activity is determined to qualify as RMRR, that activity is not a “physical change or change in the method of operation.”

Once-In-Always-In

- SPPD developing (per Mike K)
- Per Harlow, With respect to OI/AI, I don't think we should be shy from acknowledging in the slide, whenever it is produced, that a petition for review was filed just yesterday (March 26), challenging the guidance memorandum/interpretive rule in the U.S. Court of Appeals for the D.C. Circuit. There are multiple joint petitioners; I believe you will find that the case will be styled as *California Communities Against Toxics, et al. v. EPA*.



Once In Always In – not our rulemaking, but we recognize that implementation has permitting implications. Questions should be directed to the regions – we have a process for developing consistent responses which we will share with the regions.

Title V Permitting

- Rulemakings in progress
 - Petitions Process Rulemaking
- Process Improvements
 - Increased use of electronic systems
 - Central Data Exchange (CDX) for receipt of petitions
 - Beta test of permit submission system in Region 9
- Lean Kaizen Event held on March 26, 2018
 - See subsequent slide for more information



Juan 3/15

Petitions process rulemaking – Finalizing this rule closes out the last remaining issues from the Title V task force (related to the requirement to respond to comments)

NOTE: OPG is developing a document you can share with AAPCA showing how we have addressed the recommendations from the task force.

Electronic systems –
CDX for petitions

Currently piloting an electronic system for states to submit permits to EPA for review

Pilot in Region 9 – Feb/March 2018

With sufficient funding, hope to roll this out to all regions

Title V Petitions

- Title V Petitions continue to be a substantial work load
- Petitions Received FY 2018 (to date) – 8
- Petitions Resolved FY 2018 (to date) – 22
 - 15 Orders
 - 7 Resolved by other means (petitioners agreed to withdraw, previous responses identified)
- Pacificorp Hunter – EPA will not look back at decisions made in NSR permitting process in the context of title V
 - Provided that there was an opportunity for public comment and judicial review
 - Decision being challenged in 10th Circuit (Utah) and D.C. Circuit



Petitions Resolved 2018:

Orders

Linn/Berry (2) Gallatin (2)
Wheelabrator (2) – Assuming one gets signed April 2 Exxon Olefins
Hunter Wisconsin Proppants/Silica Sands (2)
Big River Steel Yuhuang (2)
Raven Exxon Refinery

Resolved by Other Means (based on our review of petitions, identified some where facilities had closed, asked petitioners to withdraw)

BC Cobb (Petitioner withdrew)
Indiana Harbor Coke (letter sent to petitioner - this was a draft permit, too early for petition)
Hanford 2007 (resolved as part of settlement of later petition)
Reichold (petitioner withdrew)
Indian River (petitioner withdrew)
General Chemical (petitioner withdrew)
Corette (petitioner withdrew)

No NSR lookback – Used in Hunter, Big River Steel, Exxon Olefins, Exxon Refinery, Gallatin
Challenge in DC Circuit is based on it being a new, national policy

Title V Permitting – Fee Guidance

- In response to a 2014 Office of Inspector General (OIG) report recommending enhanced oversight of state and local title V program fee practices, EPA issued two guidance documents on March 27, 2018.
 - * *Program and Fee Evaluation Strategy and Guidance for 40 CFR Part 70* (Title V Evaluation Guidance) and
 - * *Updated Guidance on EPA Review of Fee Schedules for Operating Permit Programs under Title V* (Updated Fee Schedule Guidance)
- These documents satisfy EPA commitments to the OIG by providing guidance for EPA regions on conducting state and local title V program and fee evaluations.
- The guidance is discretionary for EPA regions and sets no specific requirements for state programs.



Juan 3/28

We developed these in response to a 2014 Office of Inspector General (OIG) report recommending enhanced oversight of state and local title V program fee practices.

The two documents consolidate and update existing guidance, specifically updating 1993 guidance on fees.

They are consistent with Principles and Best Practices for Oversight of State Permitting Programs, which was developed in consultation with ECOS, AAPCA, NACAA, and other organizations.

The documents were reviewed by staff and management in EPA's regions, OGC, and OAQPS, as well as by state and local air agencies. A number of edits were made in response to state comments.

We originally committed to issuing guidance by September 30, 2017, but an extension was granted to allow time for state and local programs to review and provide feedback.

SIP Processing Improvements

- High priority continues to be reducing the SIP backlog and improving SIP processing times
- Trends in SIP processing:
 - Total pending SIPs reduced by 20% (between October 2013 and March 2018)
 - Historic backlogged SIPs reduced by 80% (between October 2013 and March 2018)
- SIP management improvement efforts ongoing
 - SIP management plans continue to provide opportunities for EPA regional offices and states to engage on setting SIP action priorities
 - EPA emphasizing early engagement with air agencies
 - Continued commitment to providing timely guidance on SIP development issues
 - EPA maintaining emphasis on internal SIP processing improvements
 - Using lean practices to inform opportunities for continuous improvement
 - Significant investment in IT improvements will also contribute in this area



Vera 3/9

EPA continues to refine our internal and external communications as well as implementing best practices for SIP processing. We are continuing to engage with states early to prioritize SIP reviews and actions and develop multi-year SIP management plans.

We have reduced the historic backlog that existed in October 2013 80% (from 699 SIPs to 144 SIPs as of 3/1/2018 and have reduced the total number of pending ("in-house") SIPs by over 20% since October 2013

We have improved our ability to process newly received SIPs within CAA timeframes, but number and complexity of new SIPs is making it challenging to keep some of them from becoming backlogged.

Because of this challenge there are still roughly 401 SIPs currently backlogged of the 740 SIPs pending EPA action.

Although this is a big improvement from 699 backlogged SIPs as of 10/1/2013, we know there is still work to be done to achieve our SIP processing objectives.

We believe the consultation and prioritization efforts with states is keeping us focused on acting on the most important SIPs.

SIP Processing Improvements: State Plan Electronic Collaboration System (SPeCS)

- ♦ EPA worked extensively with state air agency representatives, and partnered with E-Enterprise for the Environment and ECOS on this project over the past 18 months
 - The E-Enterprise Integrated Project Team (IPT), with 12 air agency representatives, provided useful feedback on the Plan Collection Interface (PCI) module
 - Fourteen states participated in beta testing before system was launched in January 2018
 - Training webinars and materials: <https://www.epa.gov/air-quality-implementation-plans/submit-sips-online>
- ♦ Benefits
 - Reduce paper/mailling/printing/storage costs
 - Save staff time and resources
 - Integrate multiple legacy tracking systems into one
 - Increase transparency
 - Achieve more efficient SIP processing



SLPG 3/9

The State Planning Electronic Collaboration System (SPeCS) is EPA's integrated electronic submission, review, and tracking system for State Implementation Plans (SIPs) and other air agency submissions that will enable EPA and state, local, and tribal agencies to:

Manage plan submissions and the plan review process more efficiently and effectively

Increase transparency through greater "real-time" data availability

Enhance collaboration among different levels of government

During 9/7-9/21/17, 14 states participating in beta-testing of the Plan Collection Interface part of the system

AR, CA, GA, IA, KY, MI, MS, NM, NY, OK, TX, WI, WV, WY

There are currently 49 state and local air agencies registered to use the system (FYI-Maine is the only state not registered).

SIP Processing Improvements: State Plan Electronic Collaboration System (SPeCS)

- Plans for 2018 and beyond (with sufficient funding) include:
 - Enhance State Plan Collection Interface based on ongoing user feedback
 - Develop Public Dashboard
 - Develop an Exceptional Events demonstration module
 - Develop Title V module for EPA review of state issued permits
 - Develop NSR Permit Tracking System and Technology Database
 - Coordinate SPeCS with SIP Lean efforts



SLPG 3/9

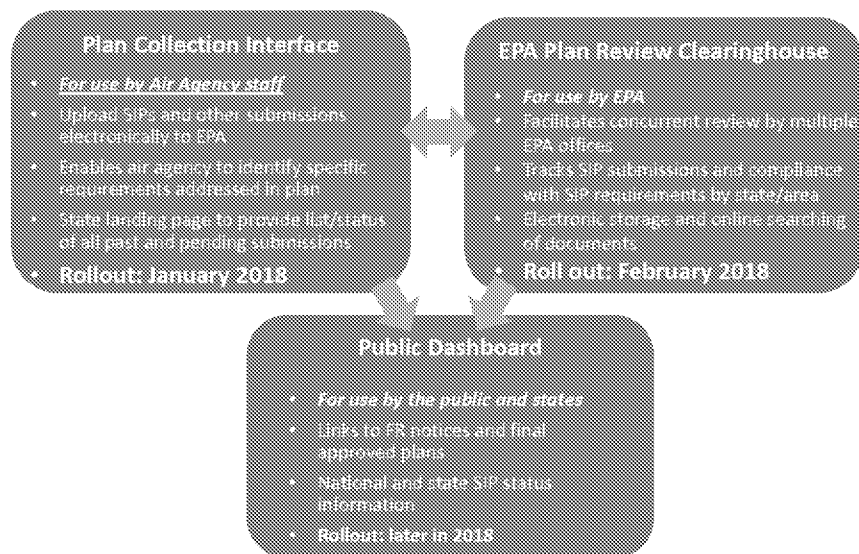
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Enhance collaboration among different levels of government

State Plan Electronic Collaboration System (SPeCS)



SLPG 3/9/Juan 3/15

SPeCS is comprised of three main components:

Plan Collection Interface: a more advanced version of the current eSIP system that allows states to upload state submissions and related data electronically

EPA Clearinghouse: internal EPA area for review of state submissions and tracking of CAA requirements

Public Dashboard: an EPA website for providing SIP-related information to the public

There are three major components for SPeCS for SIPs

A Plan Collection Interface for air agencies only. This is the portion of the system we will be covering today.

The "Landing Page" will provide a searchable list of the state's past and pending submissions.

Builds upon the existing eSIP system

Provides searchable access to previously submitted plans from the state "landing page"

Supports submission of plans using a web-based interface

Includes customized screens for different plan types, file upload capability, and completeness checks; and

Provides air agencies users with a simple, organized and consistent approach to submitting plans.

An EPA Clearinghouse for EPA only. Will be launching for EPA users in a couple of weeks.

Consolidates AirTrax and FRED functionality

Provides EPA a centralized location to manage plans.

Supports concurrent plan review by multiple offices

Provides system for identifying, elevating and resolving policy and technical issues in consistent manner

Tracks compliance of each plan with specific CAA and regulatory requirements

Provides searchable access of submissions

Integrates multiple existing EPA internal tracking systems into one

By supporting more efficient processes for plan submissions and EPA reviews, SPeCS should help reduce the SIP backlog.

A Public Dashboard for the public and stakeholders. Similar to SIP Status pages currently on the web. Will be expanded on after Clearinghouse launch.

Provides up-to-date plan status information

Links to comprehensive plan submissions and EPA Federal Register actions

Provides national and state SIP status summary information

In 2018, the infrastructure of the system is being developed for expansion to other types of plans in the future

Historical plan data will be migrated into the system.

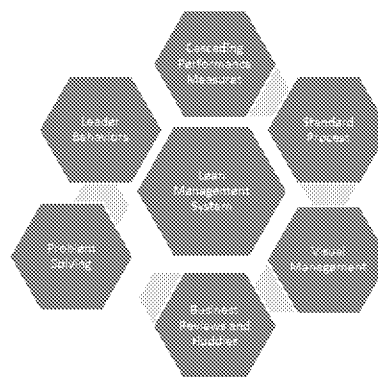
Evaluating the pros/cons of undertaking rulemaking to require or incentivize use of this electronic system by all air agencies

EPA is Implementing a Lean Management System (LMS)

EPA Desires:

- Continuous improvement through problem solving at the level closest to the work
- Continuous improvement based on respect for the people doing the work
- Accountability to the process without blaming people
- Sustainment of gains from its improvement efforts
- Development and adherence to standard processes

LEAN MANAGEMENT SYSTEM



The goal of the SIP lean event was to build a Lean Management System for SIPs in which EPA regions and headquarters offices would use visual management to more routinely take action on SIPs within Clean Air Act deadlines and eliminating the backlog by 2022.

Lean Priority Areas

- Applying lean principles to specific focus areas to:
 - Develop visual management systems
 - Identify and eliminate waste consistent with lean principles
 - Develop a more efficient and effective process
- Key areas identified include SIP processing, NSR, and Title V
- Timely action on SIPs is a priority for EPA, as reflected in EPA's recently released Strategic Plan for FY2018 – 2022 and the Agency's Reform Plan
- The Reform Plan highlights priority areas where EPA plans to apply lean tools in order to make further progress, with a new emphasis at EPA on the use of visual management tools
- SIP lean event held in February 2018 focused on both EPA process and state process – and included participants from states and a local area
 - Goal of SIP lean event was to develop process and tools that would enable EPA to eliminate the backlog and process SIPs within CAA timelines, by 2022

SIP Lean Overview and Next Steps

- Identified an ideal process that includes an emphasis on cooperative federalism and working closely with states at the outset so that states are able to submit approvable SIPs
- Described key decisions throughout the process, including the details of who should make those decisions, when, and other aspects of those decisions
- Outlined opportunities for standard work to ensure consistency across regional offices and with EPA HQ
- Considered options for addressing current pending SIPs while also implementing the new process
- Implementation details are still being developed
 - We are eager to stand this new system up as quickly as we can, and will keep you posted on our progress

Anticipated States Benefits

Identifying participants and decision makers early in the process so there is less delay.

There is a commitment from EPA to identify approvability issues before the SIP is adopted by the air agency, leading to less re-work by the air agencies and EPA.

We should see quicker approvals for state priorities such as redesignations.

Quicker processing after official submittal will help close the SIP Gap, meaning that time period between when air agencies adopt their requirements and when EPA adopts those requirements into the SIP.

There will be more regulatory certainty and quicker processing of SIPs, which can provide economic benefits to the states. Especially with redesignations.

Again, this new process will not require air agency participation, but those who cannot or choose not to participate may not see the full benefits of the new process.

There is incentive for air agencies to engage early with EPA, and many already do so, but with this new process key EPA decision makers will also be engaging early and the Lean team is hopeful these incentives will be enough to support EPA's new approach and goals.

Implementation:

We are developing an implementation plan that will identify how we will roll out and standardize the changes to the process, the standard practices and the measures. The implementation plan will also address communications and training, including involvement from and communications with air agencies.

There are changes that we will implement within EPA, such as clarifying roles and responsibilities, making decisions as close to the work being done as possible, and using templates and standard language when possible.

EPA will internally implementing a visual management board to track progress on SIP development and processing within each Region and at HQ offices.

This system will provide a framework for EPA communication with air agencies about the status of their SIP submissions throughout the process to help ensure that there is a common understanding of status and anticipated timing. Ultimately, this will provide states with more transparency about EPA's internal process and timelines.

The commitment to early engagement is expected to start applying to new SIPs as quickly as possible, and the 2015 ozone NAAQS nonattainment designations offers a great opportunity to test the new process from the beginning - from when the need for a SIP is identified.

We also recognize that we have a large number of pending SIPs. We are looking at the pending SIPs (both backlogged and not) and talking through options for handling those SIPs consistent with implementation of our more efficient lean process.

NSR and Title V Lean/Kaizen Efforts and Next Steps

- * As part of the Agency streamlining efforts, we are taking a look at the permitting process and timelines for EPA-issued permits under both Title V and NSR
- * We are applying Lean/Kaizen concepts to the permitting process with the goal of identifying actions we could take to expedite the process and make permitting more efficient
 - * These events are focused on EPA-issued permits
- * During the week of March 26, 2018, EPA HQ and Regions conducted a week-long Kaizen event focused on the Title V program
- * A week-long Kaizen event for the NSR program is scheduled for the week of April 9, 2018



Juan 3/28

To expedite federal permitting, EPA is looking for ways to increase the efficiency of the permitting process and shorten the amount of time it takes to get a permit:

First, the Agency is holding two upcoming Kaizen events looking at the permitting process for EPA-issued permits. The first Kaizen event was held the week of March 26 and focused on EPA-issued operating permits under Title V of the CAA. The second Kaizen event is scheduled for the week of April 9 and will focus on the process for EPA-issued NSR permits.

Second, EPA is tracking the amount of time it takes to issue federal permits and is committing to significantly reducing permitting times.

Questions and Comments



APPENDIX

NAAQS Reviews: Status Update

April 2018

	Ozone	Lead	Primary NO ₂	Primary SO ₂	Secondary (Ecological) NO ₂ , SO ₂ , PM	PM ²	CO
Last Review Completed (final rule signed)	Oct. 2015	Sept 2016	Jan 2010	Jun 2010	Mar 2012	Dec 2012	Aug 2011
Recent or Upcoming Major Milestone(s)³	TBD ⁴	TBD ⁴	<u>July 14, 2017</u> Proposal <u>Sept 25, 2017</u> Public Comment Closed <u>April 6, 2018</u> Final	<u>Sept. 18-19, 2017</u> CASAC review of draft PA and REA <u>May 25, 2018</u> Proposal <u>Jan 28, 2019</u> Final	<u>May 24-25, 2017</u> CASAC review of 1 st Draft ISA Late 2018 2 nd Draft ISA REA Planning Document	Late 2018 1 st draft ISA	TBD ⁴

Additional information regarding current and previous NAAQS reviews is available at: <http://www.epa.gov/naaqs/>

¹ Combined secondary (ecological effects only) review of NO₂, SO₂, and PM

² Combined primary and secondary (non-ecological effects) review of PM

³ IRP – Integrated Review Plan; ISA – Integrated Science Assessment; REA – Risk and Exposure Assessment; PA – Policy Assessment

⁴ TBD = to be determined



Anticipated NAAQS Implementation Milestones

(March 2018)

Pollutant	Final NAAQS Date	Nonattainment Designations Effective	Infrastructure SIP Due	Attainment Plans Due	Attainment Date
PM _{2.5} (2006)	Oct 2006	Dec 2009	Oct 2009	Dec 2014	Dec 2015 (Mod) Dec 2019 (Ser)
Pb (2006)	Oct 2006	Dec 2010-2011	Oct 2011	June 2012-2013	Dec 2015-2019
PM _{2.5} (2012)	Dec 2012	Apr 2015	Dec 2015	Oct 2016 (Mod)	Dec 2021 (Mod) Dec 2025 (Ser)
NO _x (2010) (primary)	Jan 2010	Feb 2012	Jan 2013	N/A	N/A
SO ₂ (2010) (primary)	June 2010	Oct 2013, Sept 2016 (+2 rounds)	June 2013	Apr 2015, Mar 2018 (Oct 2019, 2022)	Oct 2018, Sept 2021 (2023, 2026)
Ozone (2008)	Mar 2008	July 2012	Mar 2011	Mid 2015-2016	Mid 2015-2032
Ozone (2015)	Oct 2015	Mid Oct	Oct 2018	Mid 2021-2022	Mid 2021-2038



Oil and Natural Gas: 2016 New Source Performance Standards (NSPS) Update

• March 2018 Amendments

- * EPA amended two narrow provisions of the 2016 NSPS to address aspects of the rule that pose significant and immediate compliance concerns:
 - Removing the requirement that leaking components be repaired during unplanned or emergency shutdowns;
 - Creating separate monitoring survey requirements for well sites located on Alaskan North Slope
- * Amendments were in response to public comments and information received in response to June 2017 proposed stays of certain requirements in the rule and subsequent Notices of Data Availability (November 2017)

• NSPS Reconsideration

- * EPA is reconsidering certain aspects of the 2016 NSPS, including fugitive emissions requirements
 - Looking broadly at the rule during the reconsideration process
 - EPA is continuing to evaluate comments the agency received on proposed stays and NODAs
- * EPA will issue a proposal addressing the reconsideration of the rule for public review and comment at a later date



KB Mills 4/2

Reconsideration - In an April 18, 2017 letter to petitioners: EPA Administrator convened a proceeding to reconsider fugitive emissions requirements at well sites and compressor stations

June 2017 Federal Register Notice: EPA granted reconsideration of additional requirements: well site pneumatic pumps standards and the requirements for certification by professional engineer;

In the FR notice, the Agency indicated it would look broadly at the entire rule during the reconsideration process - including the issue of regulating greenhouse gases

NOTE TO SPEAKERS

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Oil and Natural Gas: Control Technique Guidelines (CTG)

- ♦ **March 2018: EPA proposed to withdraw 2016 Oil and Gas CTG in its entirety**
 - * The CTG provides recommendations for reducing volatile organic compounds emissions from existing oil and gas equipment and processes
 - CTGs are not regulations and do not impose legal requirements directly on pollution sources
 - However, once EPA issues a CTG, states must make RACT determinations for the sources it covers
 - * Because some recommendations in the Oil and Gas CTG are based on the 2016 NSPS, and others are based on the NSPS issued in 2012, EPA believes withdrawing the entire Oil and Gas CTG will be more efficient for states
 - * EPA is currently reconsidering certain aspects of the 2016 NSPS and intends to look broadly at the rule during the reconsideration process
 - * Comment period on the proposed CTG withdrawal ends April 23, 2018
- ♦ **For More Information**
 - * <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry>
 - * Contact: David Cozzie, Group Leader, Fuels and Incineration Group, 919-541-5356 or cozzie.david@epa.gov



EPA is proposing to withdraw the entire oil and gas CTG

The Oil and Gas CTG relied on data and conclusions that were used in the 2016 NSPS for the oil and gas industry. EPA is currently reconsidering certain aspects of the 2016 NSPS and intends to look broadly at the rule during the reconsideration process.

Because some recommendations in the Oil and Gas CTG are based on the 2016 NSPS, and others are based on the NSPS issued in 2012, EPA believes withdrawing the entire Oil and Gas CTG will be more efficient for states, which otherwise might be required to revise their implementation plans twice: once, to address recommendations that are tied to the 2012 NSPS, and potentially a second time after the reconsideration of the 2016 NSPS is complete.

Repeal and Replacement of the Clean Power Plan

- On October 10, 2017, after a review as directed by the Energy Independence Executive Order, EPA proposed to repeal the Clean Power Plan (CPP)
- The CPP was premised on a novel and expansive view of Agency authority, a view inconsistent with previous rules and with EPA's historic interpretation of section 111 of the Clean Air Act
- Any proposed rule to replace the CPP would return EPA's actions to its understanding that the "best system of emission reduction" for a source should be based only on measures that can be applied to or at the source
- A public hearing was held in Charleston, West Virginia, on November 28-29, 2017.
- Public listening sessions were held in Kansas City on February 21, 2018, San Francisco on February 28, 2018, and in Gillette, Wyoming, on March 27, 2018.



Repeal and Replacement of the Clean Power Plan

- The public comment period for the proposed repeal of the CPP is open until April 26, 2018. To date, EPA has received approximately 500,000 comments
- On December 18, 2017, in a separate but related action, EPA issued an Advance Notice of Proposed Rulemaking (ANPRM) to solicit information from the public about a potential future rulemaking to limit greenhouse gas emissions from existing power plants
- In light of the proposed repeal of the CPP, the focus of the ANPRM was on specific topics EPA should consider in a future regulatory action establishing emission guidelines for greenhouse gas emissions
- The comment period for the ANPRM closed February 26, 2018, and EPA received more than 250,000 comments
- For more information, go to: <https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-repealing-clean-power-plan>





5/16/19 11:00

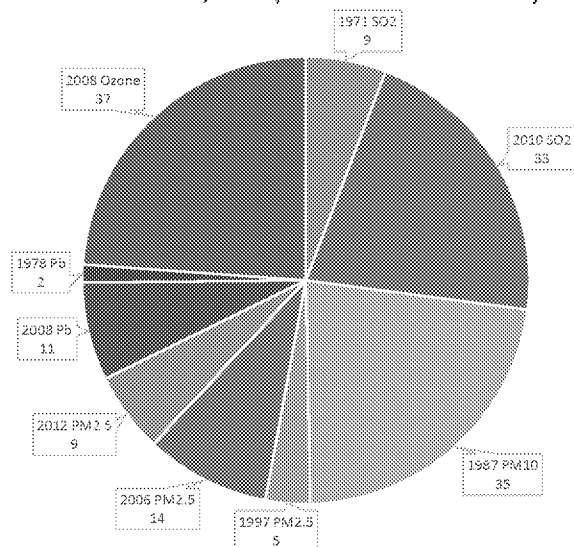
With talking points

OVERVIEW

- EPA's Clean Air Priority Goal: Reduce Number of Nonattainment Areas
- EPA Cross-Cutting Goal: SIP Process Improvements
- NAAQS Implementation Updates
 - Ozone
 - Sulfur Dioxide (SO₂)
 - Fine Particulate Matter (PM_{2.5})
- Transport
- Exceptional Events
- Regional Haze
- Startup, Shutdown, and Malfunction (SSM) Policy
- NSR and Title V Permitting Updates



Nonattainment Areas for Non-revoked NAAQS as of October 1, 2017 (status as of March 2019)



EPA Priority Goal: Reduce Number of Nonattainment Areas

- Work with states to prioritize redesignation submissions.
- Ensure states have necessary rules, guidance, and tools.
- Improve the efficiency and effectiveness of the SIP/TIP process, including EPA's review process, to maximize timely processing of requested SIP/TIP actions.
- Take federal oversight actions, where necessary.

For EPA to approve a state's requests to redesignate a nonattainment area, the request must meet the minimum Clean Air Act requirements, which include:

- A demonstration that the area has air quality that is attaining the NAAQS;
- Establishing that pollution reductions are due to implementing permanent and enforceable measures;
- A 10-year maintenance plan that includes contingency measures to be triggered in the event of a re-violation of the NAAQS; and,
- Satisfying any other applicable and outstanding attainment planning and emissions control requirements.

Updated 5/15

The baseline is the 166 areas designated nonattainment on October 1, 2017.

The baseline does not include the areas designated nonattainment after October 1, 2017

2015 ozone nonattainment areas (52)

2010 SO2 nonattainment areas (6 of 42)

1997 ozone nonattainment areas (35)

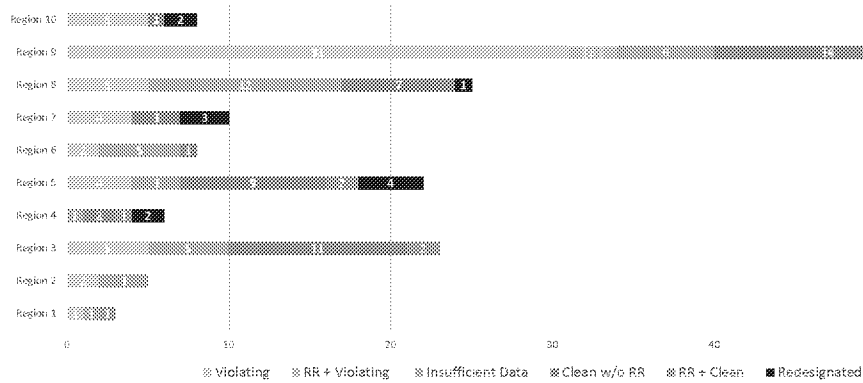
7 areas redesignated to attainment/maintenance in FY18.

6 areas fully redesignated to attainment/maintenance in FY19 to date.

A few partial areas, including MO part of PM2.5 St. Louis.

The St. Louis "area" is counted as nonattainment until IL part redesignates.

APG Nonattainment Area Status by Region: 166 FY2018 Areas



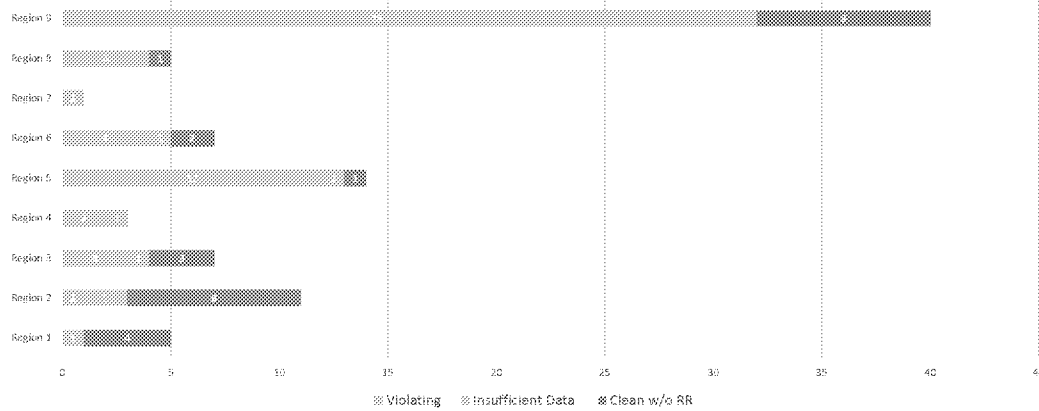
Areas in nonattainment status as of October 1, 2017, for non-revoked standards.

55 areas with Clean Data
Including 7 with Redesignation Requests

36 areas with Insufficient Data

APG Nonattainment Area Status by Region: 93 Areas

(includes designations after October 2017 plus remaining 1997 Ozone NAAQS areas)



Areas designated nonattainment effective after October 1, 2017, plus remaining 1997 Ozone NAAQS nonattainment areas.
27 areas with Clean Data

9 areas with Insufficient Data

State Plan Electronic Collaboration System (SPeCS) for SIPs

SIP Processing Improvements

- Since January 2018, EPA have been focusing efforts on developing the Internal Clearinghouse
 - The Clearinghouse is the EPA-facing portion of the system that manages and tracks submissions
 - The Clearinghouse will replace existing EPA IT systems and databases, which contain decades' worth of SIP information
- To date, states have submitted a total of **414 submissions** (357 official submissions and 57 draft submissions) SIP revisions via SPeCS since January of 2018

Plans for 2019 and Beyond

- Complete Public Dashboard
- Complete SIP Issue Tracker
- Develop an Exceptional Events Demonstration Module
- Develop the Regional Haze Module
- Develop Administrator Module
- Coordinate SPeCS with SIP Lean Efforts
- Continuously improve the State Plan Collection Interface and EPA Clearinghouse based on on-going user feedback

SIP Process Improvements – Early Engagement

- Ozone Quick Start Guide
- Early engagement during SIP development
- Upcoming activities:
 - Review and updating of SIP Toolkit SharePoint site
 - Review and updating of external-facing “SIP streamlining” website
 - Development of New Process Standard Operating Procedure
 - Consideration of key backlog reduction techniques for the most difficult SIPs including withdrawal and disapproval



Vera 3/12/19

Key focus of our current SIP process improvements (both internal and external facing) is around a concept of “early engagement.”

Ensure that air agencies and EPA are engaged early during the SIP development process so that by the time a SIP is formally submitted to EPA for action, key approvability issues have been identified and resolved as much as possible.

Mia 3/12/19

Use SPeCS to submit your draft submissions, as well as, your official submissions to EPA.

The Ozone Quick Start Guide provides sample timelines for each year different SIP requirements are due for the 2015 ozone nonattainment areas.

Intended to help air agencies develop SIPs upon which EPA can take timely action.

Looking at ensuring that website resources on SIP development and processing are up-to-date. To that end, we are looking at the two primary websites that contain SIP processing information. One is the SIP Toolkit SharePoint Site for EPA and States. The other is an external facing website on SIP streamlining.

EPA's regional offices are continuing to work with our state/local partners to identify the best path forward for the backlogged SIP submittals. As part of those conversations, we expect to continue to discuss and explore timely options to resolve SIP submittals where withdrawal or disapproval are possibilities, among other approaches.

To the extent you are aware that a SIP submittal is outdated or superseded, please coordinate with your region to help remove the outdated/superseded SIP from EPA's review queue.

2015 Ozone NAAQS: Quick Start Guide

- On February 26, 2019, EPA posted the **Quick Start Guide** at: <https://www.epa.gov/air-quality-implementation-plans/guidance-streamlining-sip-process>
- Document brings together EPA and state air agency work to “lean” SIP development and processing with requirements associated with attainment planning for 2015 ozone NAAQS nonattainment areas and OTR states
- Checklists lay out a sample timeline of key milestones intended to help EPA, state and local air agencies collaborate early and throughout the SIP development process for the 2015 8-hour ozone standard
- “Early engagement” is a critical component to supporting air agencies in the development of approvable SIPs and EPA in taking timely action on SIPs



3/14

The Guide is mainly focused on nonattainment area planning obligations.

Region 4 will cover at 3:00 pm.

2015 Ozone NAAQS Update

- 2015 Ozone NAAQS signed 10/1/15 (80 FR 65292; 10/26/15)
 - Several environmental and health organizations, industry groups, and some states filed petitions for judicial review (Murray Energy v. EPA, No. 15-1385, and consolidated cases)
 - The D.C. Circuit heard oral argument in those challenges on December 18, 2018
 - No opinion issued yet
- 2015 Ozone NAAQS SIP Requirements Rule (83 FR 62998; 12/6/18)
 - On February 4, 2019, Downwinders at Risk, Sierra Club, and National Parks Conservation Association filed a petition for review of the final 2015 ozone NAAQS SIP Requirements Rule in the D.C. Circuit
 - On March 11, 2019, the petitioners' filed their statement of issues related to:
 - NNSR interprecursor trading
 - RFP requirements
 - Milestone compliance demonstrations
 - Alternative baseline year
 - Early implemented contingency measures



3/14

Details for 1st bullet:

In case of a follow up question on the timing of the decision:

It's difficult to predict when the court will act, but in our experience (per Susan Stone/HEID), the D.C. Circuit typically issues opinions about 4-6 months after oral argument.

Details for 3rd bullet:

NNSR interprecursor trading – Did EPA unlawfully or arbitrarily authorize inter-pollutant trading or offsetting to satisfy permit requirements for construction of new or modified major sources in ozone nonattainment areas?

RFP requirements

Milestone compliance demos – did EPA unlawfully or arbitrarily allow ozone nonattainment areas to claim they have met their milestones by showing only that they have implemented controls that were previously predicted to accomplish the required reductions, without regard to whether actual emissions in the area went down by the required amount?

Alternative baseline year – did EPA unlawfully or arbitrarily claim discretion to allow states to choose the baseline year, thus allowing states to minimize or even avoid having to make the required reductions?

Contingency measures – did EPA unlawfully or arbitrarily allow nonattainment areas to meet the contingency measure requirement by identifying measures that will already have been implemented at the time of a failure to meet a milestone or attain?

Progress on Ozone NAAQS Attainment

(as of May 2019)

	1997 NAAQS (2004 Designations)	2008 NAAQS (2012 Designations)	2015 NAAQS (2018 Designations)
Initial Nonattainment Areas	115	46	52
Areas Redesignated to Attainment	80 (prior to revocation)**	9	0
Current Nonattainment Areas	35	37	52
Clean Data Determinations	26	17*	0

*Includes 15 Marginal area determinations of attainment by the attainment date and 2 Moderate area clean data determinations.

**Standard was revoked effective 4/6/2015.



[CBS UPDATED 3/14/2019]

NOTE regarding footnote*: the 2 Moderate nonattainment areas receiving CDDs are Baltimore MD, and Mariposa County CA. The Atlanta area has a CDD and is the only Moderate area redesignated to maintenance. Jamestown, NY has DAAD by the Marginal attainment date and CDD.

NOTE regarding footnote**:

One impact of South Coast II may be that EPA has an obligation to go back in time to 4/6/2015 to determine if any mandatory reclassifications for failure to attain by the attainment date are necessary.

For example, in 2014 EPA proposed a reclassification of Dallas from Moderate to Serious, but did not finalize that action because we revoked the 1997 NAAQS.

2010 SO₂ NAAQS Implementation: Nonattainment Area Overview

Designation Round	Number of Nonattainment Areas	Designation Effective Date	Attainment Plan Due Date	Attainment Date
1	29	October 4, 2013	April 4, 2015	October 4, 2018
2	4	September 12, 2016	March 12, 2018	September 12, 2021
2	3	January 12, 2022	July 12, 2018	January 12, 2022
3	6	April 9, 2018	October 9, 2019	April 9, 2023
4*	TBD	TBD	TBD	TBD

*Designations must be completed by December 30, 2020



Updated 5/16

Round 1 area history:

Areas that have been redesignated to attainment or received a Clean Data Determination (CDD):

Billings, MT

Campbell/Clermont, KY-OH

Jefferson Co., MO (CDD)

Areas that have fully approved SIPs:

Hillsborough FL

Nassau County FL

Pekin IL

Lemont IL

Central NH

Miami AZ

Warren PA

Proposed approval for the following areas:

Muscatine, IA (held up due to SSM)

Indiana PA

Sullivan County, TN

St. Bernard Parish, LA

Remaining areas are being worked on.

Round 2 – September and December 2016: EPA finalized designations for 65 areas including 7 nonattainment areas, 41 unclassifiable/attainment areas, and 17 unclassifiable areas

Litigation for Round 2 Designations

In *Masias et al. v. EPA* (10/19/18), the court ruled in favor of EPA and dismissed or denied three petitions for review

(Per GSG 3/21)

Round 3/4:

EPA finalized the Round 3 designations on December 21, 2017, for all remaining areas of the country excepting approximately 50 areas to be designated in Round 4.

Early indications are that several sites are showing violations of the NAAQS. EPA will begin engaging Round 4 states in 2019.

NOTE: EPA will not have a valid design value for Round 4 areas until after 2019 (DV will be based on the 2017-2019 monitoring data).

Round 4 – Potential Timeline;

If violating then it meets defn of nonattainment.

For specific language from "revisit" letter refer to the fact sheet in your background section of notebook.

Progress on 2010 SO₂ NAAQS Attainment (as of March 2019)

	Round 1	Round 2	Round 3
Initial Nonattainment Areas	29	7	6
Areas Redesignated to Attainment	2	0	0
Current Nonattainment Areas	27	7	6
Clean Data Determinations	1	0	0



[CBS UPDATED 3/14/2019]

Billings, MT: EPA published the final notice approving the maintenance plan and redesignation for the area on May 5, 2016.

Campbell/Clermont, KY-OH: EPA published the final notice approving the maintenance plan and redesignation for the area on November 21, 2016.

Jefferson Co., MO (CDD): EPA issued a CDD for the area on September 13, 2017.

Interstate Transport: 2015 Ozone NAAQS

- Good Neighbor SIPs for the 2015 ozone NAAQS were due October 1, 2018. EPA is committed to a “SIP First” approach.
- To date, EPA has released three memoranda intended to assist states in developing and submitting, and to assist EPA in its review of, interstate transport SIPs that address the good neighbor requirements with respect to the 2015 ozone NAAQS.
 - March 2018 Memo: Information on the Interstate Transport SIP Submissions
 - August 2018 Memo: Analysis of Contribution Thresholds (Step 2)
 - October 2018 Memo: Considerations for Identifying Maintenance Receptors (Step 1)
- These memoranda are available on EPA’s website at <https://www.epa.gov/airmarkets/memo-and-supplemental-information-regarding-interstate-transport-sips-2015-ozone-naaqs>
- EPA encourages consistency and collaboration among states linked to a common receptor and among upwind and downwind states in developing and applying a regionally consistent analytic approach



Palma 3/25/19

States are required to submit “good neighbor” SIPs within 3 years of promulgation of a new or revised NAAQS. For the 2015 ozone NAAQS, SIPs were due on October 1, 2018.

For the 1997 and 2008 ozone NAAQS, EPA developed regional rulemakings (i.e., FIPs) to address the good neighbor provisions for covered states. For the 2015 ozone NAAQS, EPA is committed to a “SIP-first” approach. In 2018, EPA developed 3 memoranda and hosted outreach calls with stakeholders to assist states in preparing fully approvable good neighbor SIPs for the 2015 ozone NAAQS.

EPA released the first memorandum on March 27, 2018. This memorandum conveyed modeling results and the contribution metrics for the 2015 standard. The modeling information included the same 2023 design value information that we released with our October 2017 memorandum but also provided contribution metrics for 2015 (note: we did not include contribution metrics with the October 2017 memo, because, for 2008 (75 ppb), we indicated that there would be no nonattainment or maintenance issues in 2023).

Example concepts: use of 1 ppb vs 1% threshold, use of non-EPA modeling, reliance on different base year (with consideration of meteorological conduciveness), conclusions that emissions trends will continue to decrease, consideration of potential/expected additional cost-effective NOx emissions reductions, consideration of international emissions. Attachment A to this memorandum identified potential flexibilities that states may be able to use in applying EPA’s (or their own) modeling results or other approaches in developing approvable SIPs for the 2015 ozone NAAQS.

In April 2018 and July 2018, EPA hosted national outreach calls to discuss both the modeling results and the identified flexibilities. We asked stakeholders to provide additional feedback.

Following those calls, we identified the following work products as additional tools that states may be able to use to aid their SIP development:

Stakeholder-submitted comments on the identified flexibilities and EPA’s comment summary document (posted to EPA’s website on 8/16/18)

Thresholds analysis (1%, 1 ppb, 2ppb) – signed on 8/31/18 and posted to EPA’s website on 9/4/18.

Identification of maintenance receptors to include an analysis of meteorological conduciveness – signed and posted to EPA’s website on 10/19/18.

EPA continues to work on tools and implementation aids to support the development of 2015 transport SIPs. We will let stakeholders know as we post any new information. We will also communicate closely with air agencies as they prepare and submit SIPs to address the good neighbor provisions for the 2015 ozone NAAQS.

As we move forward, we encourage consistency and collaboration among states linked to a common receptor and among upwind and downwind states in developing and applying a regionally consistent analytic approach.

Section 126 petitions (we do not have a slide but here is status):

It was filed by NY, received on March 14, 2018.

The NY petition named more than 350 EGU and non-EGU sources projected to emit at least 400 tpy of NO_x in 9 upwind states (IL, IN, KY, MD, MI, OH, PA, VA, WV) and addressed both the 2008 and 2015 ozone NAAQS.

On May 11, 2018, EPA extended the deadline to act on the NY petition by 6-months to November 9, 2018.

On April 12, 2019, NY filed a complaint for failure to perform a mandatory duty. We are not currently operating under any court ordered deadline.

On May 6, 2019, the Administrator signed the proposal. The public hearing is scheduled for June 11 in DC and the public comment period will close on July 15.

Note: action is likely to pub on May 17, although we do not have confirmation of this yet.

Exceptional Events Update

- We have concurred on 25 demonstrations that were submitted since EPA revised the Exceptional Events Rule in September 2016
- We continue developing new guidance documents to help right-size demonstrations and facilitate the exceptional events process – Thank you for feedback on drafts!
 - * Stratospheric Ozone Intrusion Guidance – Released November 2018
 - * Updated High Wind Dust Event Guidance – Released April 4, 2019
 - * Clarification Memo on Data Modification – Released April 4, 2019
 - * Prescribed Fire Guidance – Ready to begin OMB interagency review process
- EPA's exceptional events webpage provides key resources, including example demonstrations, and will continue to be updated as new materials become available
 - * <https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events>



4/9/19

Stratospheric Ozone Intrusion Guidance: The guidance is intended to assist air agencies in preparing demonstrations for stratospheric ozone intrusions that satisfy the requirements of the Exceptional Events Rule. This document provides example language and example technical analyses that air agencies may use in demonstrations.

Updated High Wind Dust Event Guidance: The guidance is intended to assist air agencies in satisfying the requirements of the Exceptional Events Rule for high wind dust (i.e., PM₁₀ and PM_{2.5}) events and to provide example language and analyses for demonstrations. The document is a comprehensive update of the 2013 Interim Guidance for High Wind Dust Events.

Clarification Memo on Data Modification: The memo is intended to clarify the types of regulatory determinations, actions, and analyses for which EPA may consider certain modified air quality monitoring data. More specifically, the memo clarifies for which regulatory determinations a request to exclude monitoring data may be made under the Exceptional Events Rule. The document also identifies other determinations, actions, and analyses that are not covered by the Exceptional Events Rule, but for which the exclusion, selection, or adjustment of monitoring data may be appropriate and allowable under other sections of the Clean Air Act and EPA rules or guidance (e.g., modeling for PSD background).

Prescribed Fire Guidance: This guidance is an addendum to the Wildfire Ozone Guidance released in 2016. The document provides information to support the development of demonstrations under the Exceptional Events Rule for prescribed fires that may have influenced ozone or particulate matter concentrations.

Regional Haze: Ongoing Work

- Moving forward as described in the September 11, 2018, Regional Haze Reform Roadmap
- Key principles for implementation of the second planning period include:
 - Ensuring that states have the information they need to develop approvable regional haze plans
 - Ensuring that states have discretion and flexibility to select sources for reasonable progress analysis and whether and how to control sources of visibility-impairing pollutants
 - Ensuring that we are on a path that enables compliance with the Clean Air Act and improved visibility in Class I areas



Updated 5/16

Roadmap outline the implementation tools and guidance products that EPA will release over the next year to help states during their 2021 SIP development

Our primary focus is supporting states for their SIP development work already underway for the second period, which I'll focus on today.

Consistent with these key principles, EPA is looking closely at what air agencies may need to develop approvable SIPs for the second planning period, recognizing that many air agencies/multi-jurisdictional planning organizations are already underway with SIP development.

With particular regard to the guidance, EPA is considering whether there are aspects of the draft guidance that are ambiguous and/or do not provide air agencies with the type of support that's needed at this time to enable development of approvable SIPs.

EPA is considering these principles while we develop guidance for the second planning period. Specifically with regard to providing air agencies with additional information and context regarding selection of sources for consideration, consideration of visibility benefits along with the four statutory factors for reasonable progress, and the relevance of previous decisions to adopt emission control measures to meet other CAA requirements.

Information Outlined in EPA's Roadmap for the Second Planning Period

- **Fall 2018** – Final recommendations on selecting the 20% most impaired days, including methods for adjusting the glidepath (Section 5 of 2016 Draft Guidance)
 - ✓ Finalized December 20, 2018
- **Spring 2019** – Update, as necessary, natural visibility conditions estimates
- **Spring/Summer 2019** – Update 2028 visibility modeling platform (incl. estimates of US and international source contributions for Class I Areas)
- **Summer 2019** – Final guidance on regional haze SIP development will focus on topics such as:
 - Additional information and context regarding screening sources before in-depth analysis, including relevance of previous decisions to adopt emission controls to meet other CAA requirements
 - Consideration of visibility benefits along with the four statutory factors



[GSG - 3/12/19]

[Vera - 3/15/19]

On December 20, 2018, We finalized the "Technical Guidance on Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program." which is available on our visibility webpage.

We continue to participate in recurring MJO regional haze calls to stay apprised of state and MJO progress and approaches that we are keeping in mind as we develop the final guidance

[If asked: We are making good progress, but are still assessing what impact, if any, the government shutdown will have on our timeline for releasing the remaining products, but our continued goal is to get them out as soon as possible as we know states are already working on their second period SIPs.]

OMB has requested to review the RH guidance so timing has been delayed from spring to summer 2019.

What's on the Horizon for the Second Planning Period

- SIPs due by July 2021
- EPA will complete Roadmap products in Spring/Summer 2019
- Some states plan to submit in 2019
- Regional Offices are available for questions or preliminary feedback
- We encourage early engagement on these SIPs



[GSG - 3/12 - New slide]

Looking forward to the second implementation period, we expect some states will submit in 2019 and we have already seen a handful of draft SIPs. We encourage states and RPOs to continue working together and sharing information. Our Regional Offices are a great resource that states can take advantage of during their SIP development process for questions or draft SIP review. As mentioned, a key principle for the second planning period is to empower states with information and flexibility so EPA is ready to assist states as they develop these SIPs.

SSM SIP Call Under Policy Review

- Final SSM SIP Action of 2015 concerned SIP provisions for treatment of excess emissions occurring during periods of startup, shutdown and malfunction (SSM)
 - Included SSM SIP Call that applied to 36 states (45 jurisdictions)
- Judicial review of the SSM Action is pending before the D.C. Circuit, but case is currently being held in abeyance to allow for review within EPA
- On October 16, 2018, EPA granted TCEQ's petition for reconsideration with respect to the Texas SIP call for certain affirmative defense provisions in Texas' SIP



3/14

Challenges to the SSM Action are pending before the D.C. Circuit in Case No. 15-1239 (and consolidated cases) captioned Environmental Committee of the Florida Electric Power Coordinating Group, Inc. v. EPA (formerly captioned Walter Coke, Inc. v. EPA, Case No. 15-1166).

Although the court is holding this case in abeyance, neither the court nor EPA has stayed the SSM Action. SIPs were due November 22, 2017.

EPA stated in its most recent 90-day status report filed 2/8/19 with the court that EPA is continuing to review the SSM Action to determine whether to reconsider all or part of the SSM Action and also continues to consider what action to take following the Agency's decision to grant, in part, TCEQ's administrative petition for reconsideration of the Texas SIP call.

If asked about Bill previous comments at AAPCA, you can say that "At this point, we continue to review the final SSM Action to determine next steps, and we appreciate your continued patience as we do that."

Generally, EPA is not taking action with respect to any SSM-related SIP provisions until the Administrator's Office has completed its full review of the SSM Action. Thus, all SIP actions that concern SSM provisions are considered "on hold until further notice."

Once the Administrator has completed its review, EPA Regional Offices will be advised as to how to act on SSM-related SIP submissions.

Submissions made. As of May 2018, EPA has:

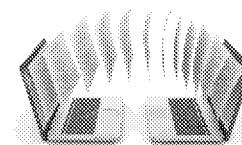
Received submissions from 30 of the 45 SIP jurisdictions (among 25 of the 36 states SIP-called).

Approved a corrective SIP revision for Tennessee's Knox County AQMD (final rule published 12/16/2016 at 81 FR 91033).

Proposed approval for another 5 SIP jurisdictions, most recently through notice published 5/1/17.

EPA's Electronic Permitting System (EPS) for State-Issued Permits

- The EPS is based in the EPA's Central Data Exchange (CDX) and utilizes the same platform as State Planning Electronic Collaboration System (SPECS) for SIPs
- Our goal is to provide a consistent means for transmitting permits to the EPA for review and to provide information on the status and official communications back to the permitting authority
- We are looking for states that want to volunteer to begin using the system in order to provide feedback and suggestions for enhancements



3/21

The system borrows many of the same modules that states are already familiar with from SPECS for SIPs, such as the state landing page with a summary of all submissions, similar forms, and custom notification settings.

We want to work with the states in exploring the possibility of EPS communicating with and gathering information from state electronic systems that are already tracking permits at the state-side.

NSR Improvement Phase 1 Actions

Phase 1

Phase 2

- Actual-to-Projected-Actual Applicability Test Guidance Memorandum
- Project Emissions Accounting Memo
- Once-In-Always-In Policy Change
- Source Aggregation
 - Common Control Guidance, Meadowbrook Letter
 - Draft Guidance on Interpreting Adjacency
- PM_{2.5} and Ozone SILs Guidance
- Project Aggregation Reconsideration Final Action
- Draft Ambient Air Policy



3/14

Actual-to-Projected-Actual Applicability Test Guidance Memorandum (12/7/17)

Project Emissions Accounting Memo (3/13/18)

Once-In-Always-In Policy Change (done need to check date)

Source Aggregation

Common Control Guidance, Meadowbrook Letter (4/30/18)

Draft Guidance on Interpreting Adjacency (9/5/18)

PM_{2.5} and Ozone SILs Guidance (4/7/18)

Project Aggregation Reconsideration Final Action (11/15/18)

Draft Ambient Air Policy (released 11/9/18)

Ongoing Phase 1 Actions

Phase 1

Phase 2

Action	Status	Target Date
Final Adjacency Guidance	Reviewing Comments	Summer 2019
Final Ambient Air Guidance	Reviewing Comments	Summer 2019
NPRM Project Emissions Accounting		Summer 2019
NPRM Treatment of Biomass for Permitting		TBD



5/14

Final Adjacency Guidance : This guidance clarifies how we interpret “adjacent” for all industries other than oil and gas operations. Comment period closed October 5, 2018.

OMB has requested to review so timing moved from spring to summer 2019.

Final Ambient Air guidance: This guidance clarifies that public access need not only be prevented by a fence or physical barrier; effective measures (such as patrols, cameras etc) may also be used. The comment period ended on January 11, 2019. OMB has requested to review so timing moved from spring to summer 2019.

NPRM Project Emissions Accounting; This proposed rule clarifies and codifies the March 2018 guidance memo on Project Emissions Accounting i.e that emissions decreases can also be considered with emissions increases in Step 1.

NPRM Biomass - EPA considering regulatory approaches related to the treatment of biogenic CO2 emissions from stationary sources

Upcoming Phase 2 Improvement Actions

Phase 1 Phase 2

Action	Target Date
NPRM NSR Error Corrections Rule	Summer 2019
NPRM Oil and Gas FIP Part I Registration Form Amendment	Summer 2019
Begin Actual Construction Guidance (Draft)	Fall 2019
Routine Maintenance Repair and Replacement (RMRR) Guidance (Draft)	Fall 2019



3/21

NSR Error Corrections Rule: This rule would correct errors in NSR regulations (over the years) due to typos, incorrect citations; FR's not updated to remove vacated elements etc

NPRM Oil and Gas FIP Part I Registration Form Amendment: This rule would reduce the pre-construction waiting period by up to 30 days; Rather than submitting the Part I Registration Form after the 30-day approval of the ESA/NHPA screening determination submission, oil and gas sources can submit the Part I Form concurrently with the screening submission.

BAC Guidance: This guidance would evaluate potential flexibilities that may be appropriate in allowing certain non-emitting activities to construct prior to getting a permit.

RMRR Guidance: This guidance would clarify that assessment of "Routine" should be done based on industry and not the 'source' in question

Upcoming Phase 2 Improvement Actions (con't)

Phase 1 Phase 2

Action	Target Date
Plantwide Applicability Limit (PAL) Guidance (Draft)	Fall 2019
NSR Actual to Projected Actual Applicability Test (ATPA) Guidance (Draft)	Fall 2019
2010 NSR Reconsiderations (Reasonable Possibility, Fugitive Emissions and Ethanol)	TBD
NSR E-Guidance Compendium and Training	December 2019



3/21

PAL Guidance: This Guidance would evaluate any potential flexibilities/clarifications that may be appropriate for PAL renewals, permit reopening, and PAL expiration.

NSR ATPA Test: This Guidance would provide clarity on several aspects of the applicability test including "could have been accommodated", "excludable emissions" etc

NSR Reconsiderations: We are hoping to close out these pending Reconsiderations from 2010

NSR E-Guidance Compendium: We intend to develop an electronic NSR Guidance database to streamline and make the system user friendly. It would also provide a one stop shopping of applicable statute, regs, links to guidance documents

NSR Training: We intend to develop training modules to address the training needs of State/Local air agencies.

Title V Permitting

- Rulemakings in Progress
 - * Finalize Title V Petitions Process Rulemaking – Summer 2019
- Process Improvements
 - * Increased use of electronic systems
 - EPA's Electronic Permitting System for EPA Review of State Air Permits
 - State workgroup will begin in June 2019 to test the system and provide feedback.
 - * Petition Resolution
 - Resolving more petitions (see Appendix)
 - Addressing petitions more quickly
- Lean Kaizen Event held last year (Heather will cover in more depth)
 - * Overall goal for Agency-issued permits is 6 months from receipt
 - * Currently tracking against statutory 18-month deadline
 - * Begun work on an electronic permitting system for EPA to receive electronic title V and NSR applications



3/14

Petitions process rulemaking – Finalizing this rule closes out the last remaining issues from the Title V task force (related to the requirement to respond to comments)

Electronic systems –

CDX for petitions

Currently piloting Electronic Permitting System (EPS) for EPA Review of State Air Permits with Region 9 and 10

State workgroup forming with 16 state and local permitting authorities

Petitions – see Appendix Slide

Have resolved petitions with deadlines

Continuing to resolve older petitions

Able to assign petitions as they come in (rate at which they are coming in has slowed)

Working with states on more global solutions (assisting states with comment responses, identifying issues in common with other petitions)

Title V Petitions

- Title V Petitions continue to be a substantial work load
- Petitions Received FY2018 – 10
- Petitions Resolved FY2018 – 34
 - 19 Resolved by Orders
 - 15 Resolved by other means (petitioners agreed to withdraw, previous responses identified)
- New petitions Received so far in FY2019 – 6
- Petitions Resolved so far in FY2019 – 16



Updated 5/16

2019

5 Petitions Received so far in FY2019

Lasalle Bioenergy, Otter Tail, Montgomery County, Wheelabrator Concord, New York Bay Cogeneration Highland Pellets
16 petitions Resolved in FY2019

Welsh

Suncor

Hanford

PNG Wadesboro

Cargill

Hyland Landfill Scott Petition and 1 non 505(b)(2) letter

Algonquin – incl. 8 petitions and 2 non-505(b)(2) letters

Ameren Labadie

Ameren Sioux

Petitions Resolved in 2018:

Orders

Linn/Berry (2), Gallatin (2), Wheelabrator, Exxon Olefins, Hunter, Wisconsin Proppants/Silica Sands (2), Big River Steel, Yuhuang (2), Raven, Exxon Refinery, Motiva, Pasadena, South Louisiana Methanol (2), Phillips 66

Resolved by Other Means (based on our review of petitions, identified some where facilities had closed, asked petitioners to withdraw)

BC Cobb (Petitioner withdrew)

Indiana Harbor Coke (letter sent to petitioner - this was a draft permit, too early for petition)

Reichold (petitioner withdrew)

Indian River (petitioner withdrew)

General Chemical (petitioner withdrew)

Corette (petitioner withdrew)

Entergy (4) petitioner withdrew

Sunbury (plant closed, consent decree resolved)

Shawville (plant closed, consent decree resolved)

NRG – state corrected permit

No NSR lookback – challenge in DC Circuit is based on this being a new, national policy – we say it isn't.

EPA's Electronic Permitting System (EPS) for State-Issued Permits

- Features of EPS:
 - Receive draft, proposed, and final title V permits and draft and final NSR permits
 - Includes a form where states can provide general information on the facility (which is pulled using the EPA's Facility Registry Service), the type of permit, whether there were public comments, an attachment field for the permit record, etc.
 - Includes a permit collection interface page for each permitting authorities that provides states the ability to submit new permits, update previously submitted permits, and view all pending and final submissions to the EPA

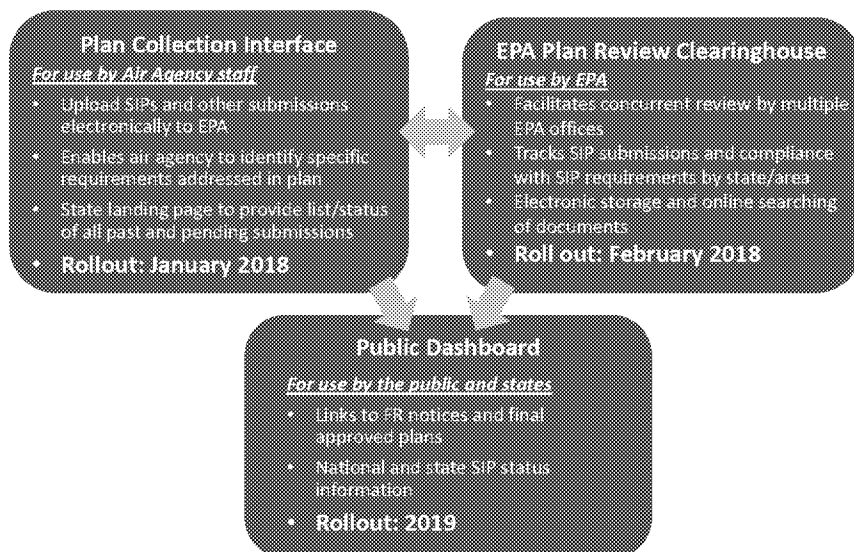


Questions and Comments



APPENDIX

State Plan Electronic Collaboration System (SPeCS) for SIPs



3/12

SPeCS is comprised of three main components:

Plan Collection Interface: a more advanced version of the current eSIP system that allows states to upload state submissions and related data electronically

EPA Clearinghouse: internal EPA area for review of state submissions and tracking of CAA requirements

Public Dashboard: an EPA website for providing SIP-related information to the public

There are three major components for SPeCS for SIPs:

The "Landing Page" will provide a searchable list of the state's past and pending submissions.

Builds upon the existing eSIP system

Provides searchable access to previously submitted plans from the state "landing page"

Supports submission of plans using a web-based interface

Includes customized screens for different plan types, file upload capability, and completeness checks; and Provides air agencies users with a simple, organized and consistent approach to submitting plans.

An EPA Clearinghouse for EPA only. Will be launching for EPA users in a couple of weeks.

Consolidates AirTrax and FRED functionality

Provides EPA a centralized location to manage plans.

Supports concurrent plan review by multiple offices

Provides system for identifying, elevating and resolving policy and technical issues in consistent manner

Tracks compliance of each plan with specific CAA and regulatory requirements

Provides searchable access of submissions

Integrates multiple existing EPA internal tracking systems into one

By supporting more efficient processes for plan submissions and EPA reviews, SPECS should help reduce the SIP backlog.

A Public Dashboard for the public and stakeholders.

Provides up-to-date plan status information

Links to comprehensive plan submissions and EPA Federal Register actions

Provides national and state SIP status summary information

Progress on PM_{2.5} NAAQS Attainment

(as of March 2019)

	1997 PM _{2.5} (2005 Designations)	2006 PM _{2.5} (2009 Designations)	2012 PM _{2.5} (2015 Designations)
Initial Nonattainment Areas	39	32	9
Areas Redesignated to Attainment	34	18	0
Current Nonattainment Areas	5 *	14	9
Clean Data Determinations	4	9	3

*Includes St. Louis, MO-IL area. Missouri portion of area redesignated on 10/2/2018. Waiting for 3 years of monitoring data from Illinois side of nonattainment area.



[CBS UPDATED 3/14/2019]

For 2012 PM_{2.5} NAAQS, final CDD's published for Delaware County, PA, Lebanon County, PA and West Silver Valley, ID

Remaining nonattainment areas by PM_{2.5} NAAQS:

1997 PM_{2.5} NAAQS –

SERIOUS

San Joaquin Valley, CA

CDD:

Libby, MT

Liberty-Clairton, PA

Los Angeles-South Coast Air Basin, CA

St. Louis, MO-IL (MO part of area is maintenance)

2006 PM_{2.5} NAAQS –

SERIOUS

Fairbanks, AK

Los Angeles-South Coast Air Basin, CA

Provo, UT

Salt Lake City, UT

San Joaquin Valley, CA

MODERATE

Logan, UT-ID (received two 1 year extensions)

CDD:

Imperial Co, CA

Klamath Falls, OR

Liberty-Clairton, PA

Logan, UT-ID

Nogales, AZ

Oakridge, OR

Sacramento, CA

San Francisco Bay Area, CA

West Central Pinal, AZ

2012 PM2.5 NAAQS –
MODERATE
Allegheny County, PA
Cleveland, OH
Imperial County, CA
Los Angeles-South Coast Air Basin, CA
Plumas County, CA
San Joaquin Valley, CA
CDD:
Delaware County, PA
Lebanon County, PA
West Silver Valley, ID

NAAQS Implementation Milestones

(March 2019)

Pollutant	Final NAAQS Date	Nonattainment Designations Effective	Infrastructure SIP Due	Attainment Plans Due	Attainment Date
$PM_{2.5}$ (2006)	Oct 2006	Dec 2009	Oct 2009	Dec 2014	Dec 2015 (Mod) Dec 2019 (Ser)
Pb (2008)	Oct 2008	Dec 2010-2011	Oct 2011	June 2012-2013	Dec 2015-2019
$PM_{2.5}$ (2012)	Dec 2012	Apr 2015	Dec 2015	Oct 2016 (Mod)	Dec 2021 (Mod) Dec 2025 (Ser)
NO_2 (2010) (primary)	Jan 2010	Feb 2012	Jan 2013	N/A	N/A
SO_2 (2010) (primary)	June 2010	Oct 2013, Sept 2016, Dec 2017 (+1 round)	June 2013	Apr 2015, Mar 2018, Oct 2019 (+2022)	Oct 2018, Sept 2021, Apr 2023 (+2026)
Ozone (2008)	Mar 2008	July 2012	Mar 2011	Mid 2015-2016	Mid 2015-2032
Ozone (2015)	Oct 2015	Aug 3, 2018 (all but San Antonio, TX) Sep 24, 2018 (San Antonio, TX)	Oct 2018	Aug 2021-2022	Aug 2021-2038



NAAQS Reviews: Status Update

(May 2019)

	Ozone	Lead	Primary NO ₂	Primary SO ₂	Secondary (Ecological) NO _x , SO ₂ , PM	PM ²	CO
Last Review Completed (final rule signed)	Oct. 2015	Sept 2016	April 2018	Feb 2019	Mar 2012	Dec 2012	Aug 2011
Recent or Upcoming Major Milestone(s)	<u>Summer 2019</u> Draft ISA ³ <u>Early 2020</u> Proposal <u>Late 2020</u> Final	TBD ⁴	TBD ⁴	TBD ⁴	<u>Timing depends on PM₁₀/O₃ schedules</u> Final ISA; draft REA/PA ³	<u>April 11, 2019</u> CASAC letter on draft ISA ³ <u>Early 2020</u> Proposal <u>Late 2020</u> Final	TBD ⁴

Additional information regarding current and previous NAAQS reviews is available at: <http://www.epa.gov/naaqs/>

¹ Combined secondary (ecological effects only) review of NO_x, SO₂, and PM

² Combined primary and secondary (non-ecological effects) review of PM

³ IRP – Integrated Review Plan; ISA – Integrated Science Assessment; REA – Risk and Exposure Assessment; PA – Policy Assessment

⁴ TBD = To be determined



Table updated 5/13/19

Ozone and PM_{2.5} public message regarding schedule:

EPA is planning for final decisions in late 2020

We are currently having internal discussions on the detailed schedules and process steps that will get us to those final decisions.

SO₂: On Feb 25, 2019 the Administrator signed a notice of final rulemaking retaining the existing primary SO₂ standards. The notice was published in the Fed Register on March 18.

NO_x/SO_x: On March 20, 2012 then-Administrator Lisa Jackson signed a final decision retaining the existing secondary standards for NO₂ and SO₂. We are currently in the process of conducting the next periodic review of those standards.

Interstate Transport: 2008 Ozone NAAQS

- * On December 6, 2018, EPA finalized a determination that the 2016 Cross State Air Pollution Rule Update (CSAPR Update) fully addresses interstate ozone transport obligations for 20 states in the eastern US with respect to the 2008 ozone NAAQS (83 FR 65878, 12/21/18)
 - * The final rule determines that 2023 is an appropriate future analytic year to evaluate further good neighbor requirements
 - * The rule uses the latest data and modeling to assess air quality for 2023 and finds that there will be no remaining nonattainment or maintenance areas for the 2008 ozone NAAQS in the eastern US
 - * With this determination, EPA has no obligation to establish additional requirements for sources in the 20 covered states to further reduce transported ozone pollution under the 2008 ozone NAAQS
 - * The covered states do not need to submit state implementation plans (SIPs) that would establish additional requirements beyond the existing CSAPR Update with regard to the 2008 ozone NAAQS



Palma 3/25/19

Background:

CSAPR Update was finalized in September 2016 to address summertime interstate transport of ozone pollution for the 2008 ozone NAAQS (first implementation period was May – September 2017)

Based on the information available at the time of the CSAPR Update rulemaking, EPA could not conclude that the rule fully addressed good neighbor obligations for 21 of the 22 CSAPR Update states (except TN). Thus, the 2016 CSAPR Update was finalized as a partial remedy FIP w/r/t the covered states and their interstate transport obligations for the 2008 ozone NAAQS. On 1/17/18, NY and CT filed a joint complaint re EPA's failure to promulgate fully compliant FIPs by 8/12/17 for IL, MI, PA, VA and WV. *New York v. Pruitt*, No. 1:18-cv-00406-JGK (S.D.N.Y.).

In response to this challenge, the court entered an order setting dates of 6/29/18 for a proposed action and 12/6/18 for a final action to fully address the good neighbor obligations for the named states.

The CSAPR Close-Out, finalized on December 6, 2018, used the latest data and new modeling to support a determination that there will be no remaining nonattainment or maintenance areas for the 2008 ozone NAAQS in the eastern US in the year 2023. Thus, the CSAPR Close-out (also known as the Determinations Rule) determined that the 2016 CSAPR Update was, in fact, a full remedy FIP for the covered states w/r/t the 2008 ozone NAAQS.



2008 Ozone NAAQS Implementation: Determinations of Attainment/Attainment Date Extensions/Reclassifications for Moderate Areas

- Attainment date for Moderate areas: July 20, 2018
- Statutory deadline for issuing final determinations: January 20, 2019
- NPRM published November 14, 2018
 - EPA proposed determinations of attainment/failure to attain (and reclassification to Serious), and 1-year attainment date extensions based on 2015-17 DV for 11 areas
 - Proposal also included due dates for attainment plans and RACT implementation
- Final notice anticipated in late spring 2019



3/14

NPRM published November 14, 2018

First comment period: November 14-December 14, 2018

Public hearing held in Washington, DC on February 15, 2019

Second comment period: February 8 – 22, 2019

Proposal also included due dates for attainment plans and RACT implementation

SIP for RACT needed for attainment purposes and all other SIP elements required for Serious areas: Due one year from the effective date of the final rule

SIP for RACT independent of attainment: Due August 3, 2020; alternatively, due 24 months from the effective date of the final rule

RACT implementation: Due August 3, 2020; alternatively, due January 1, 2024

In the November FR notice, we proposed:

2 areas attained by the attainment date

Baltimore, MD, and Mariposa County, CA, attained based on 2015-17 DV

2 areas expected to qualify for a 1-year attainment date extension to July 20, 2019

Sheboygan County, WI and Denver-Boulder, CO

7 areas failed to attain and will be reclassified to Serious with July 20, 2021, attainment date

Greater Connecticut

NY-N. NJ and Long Island

Chicago-Naperville

Nevada County (Western part) in CA

Houston-Galveston-Brazoria

Dallas-Fort Worth

San Diego County

2008 Ozone NAAQS Implementation: Post-South Coast II Decision

South Coast Air Quality Management District v. EPA (2018)

- South Coast AQMD and env. petitioners (Sierra Club et al.) challenged various elements of the 2008 Ozone NAAQS SIP Requirements Rule (SRR), including elements related to revoking the 1997 NAAQS (effective April 6, 2015), and the associated anti-backsliding requirements
 - The D.C Circuit decision (February 16, 2018) upheld about half of the challenged elements and vacated several flexibilities in the SRR
 - As a result of decision- 1997 ozone NAAQS nonattainment and maintenance areas that are attainment for the 2008 NAAQS are again subject to non-transportation conformity control measures as anti-backsliding requirements



Reviewed 3/21

We continue to work on providing substantive answers to the questions we've received from you. Please be assured that we have been focusing on the most pressing questions and issues first.

Please continue to direct your specific questions regarding impacts of the decision on particular areas to the appropriate EPA Regional Office for consideration.

BACKGROUND ON CHALLENGE

Env. petitioners included Sierra Club, Conservation Law Foundation, Downwinders at Risk, and Physicians for Social Responsibility – Los Angeles.

Oral arguments were held on September 14, 2017.

South Coast challenged EPA's limiting "Reasonable Further Progress" or RFP emissions reduction credits to emissions reduced "in the area." South Coast alleged that the Agency erred by not allowing credit for "out-of-area" emission reductions that improve an air districts air quality within the NA area.

Environmental petitioners challenged EPA's 2008 SIP Requirements Rule provisions that revoked the 1997 Ozone NAAQS for all areas and purposes 1 year after designations are effective. The environmental petitioners also challenged how the 2008 rule addresses the anti-backsliding requirements.

BACKGROUND ON REHEARING REQUEST

On Friday, September 14, 2018, the D.C. Circuit granted in part and denied in part EPA's petition for rehearing – granting our request "solely to the extent that vacatur of the portion of the Rule that exempts orphan areas from transportation conformity be stayed until February 16, 2019. In all other respects, the petition is denied."

This means that the court will not be changing its substantive decision in the case and that all orphan areas (which were nonattainment or maintenance for the 1997 ozone NAAQS but attainment for the 2008 NAAQS at the time of initial designation) are subject to non-transportation conformity control measures as anti-backsliding requirements now that the mandate was issued (Thursday, September 27).

STATS:

For the 1997 NA areas:

There are 35 areas that remain designated nonattainment for 1997 ozone NAAQS.

29 of the 35 areas are meeting NAAQS and may be eligible to redesignate.

16 of the 29 areas are in the OTR where there is little perceived benefits from redesignating.

Areas which must submit a 2nd 10-yr maintenance plan soon (or are overdue):

63 areas were 1997 maintenance and 2008 attainment (SC2 called orphan maintenance areas) that must submit 70 second maintenance plans

67 of the 70 second maintenance plans are overdue

Another 6 areas have part of the 1997 maintenance area not included in the 2008 nonattainment area boundaries (SC2 called these partial orphan maintenance areas).

The Regions are working with their states to include the deficient portion of the 1997 maintenance areas in the 2008 maintenance plans for the areas.□

2008 Ozone NAAQS Implementation: Post-South Coast II Decision

- On November 21, 2018, EPA posted a **Resource Document for 1997 Ozone NAAQS Areas: Supporting Information for States Developing Maintenance Plans**
- This resource document and technical information may assist states in developing initial or second maintenance plans for certain 1997 ozone NAAQS areas.
- For more info, please contact Regional Office staff or visit
 - <https://www.epa.gov/ground-level-ozone-pollution/1997-ozone-national-ambient-air-quality-standards-naaqs-nonattainment>



[Last bullet updated 11/26/18]: As a result of the SCII court decision, certain 1997 ozone maintenance areas have obligations to submit second maintenance plans (MPs).

(In addition, some 1997 ozone nonattainment areas may wish to request redesignation and submit initial MPs.) A Resource Document and technical data were posted on EPA website on 11/21/2018 which may help states develop MPs, including Limited MPs.

Past LMP guidance indicated that if an area's air quality concentration is <85% of standard and the dv has been fairly stable in recent years, then the state would not need to provide a projection year inventory in the plan.

The Resource Document reviews previously issued Limited MP guidance docs, but is not to be considered a new guidance document.

NOTE to ANNA: **Ex. 5 Deliberative Process (DP)**

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

2015 Ozone NAAQS: Infrastructure SIPs

- Infrastructure SIPs due October 1, 2018 for the 2015 ozone NAAQS
 - * Submittals received
 - * EPA may become subject to a mandatory duty suit to issue findings of failure to submit overdue infrastructure SIPs
- **Guidance on Infrastructure State Implementation Plans (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2)** issued September 13, 2013
 - * https://www3.epa.gov/airquality/urbanair/sipstatus/docs/Guidance_on_Infrastructure_SIP_Elements_Multipollutant_FINAL_Sept_2013.pdf



3/14

First bullet:

As of today, EPA received 17 submittals, 15 were full submissions (other 2 submittals either left prongs 1 and 2 out or only covered prongs 1 and 2)

EPA could receive an NOI to sue to compel an FFS as soon as April 1, 2019; complaint could not come in before June 1, 2019 (60 days later)

States still developing their SIPs should refer to EPA's Guidance on Infrastructure State Implementation Plans (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2) which was issued September 13, 2013

PM_{2.5} NAAQS Implementation

- EPA focusing efforts on supporting states with 2006 PM_{2.5} NAAQS Serious areas and 2012 PM_{2.5} NAAQS Moderate areas
 - 2006 NAAQS Serious area attainment date: December 31, 2019
 - 2012 NAAQS Moderate area attainment date: December 31, 2021
- EPA is targeting spring 2019 for releasing the **revised Draft PM_{2.5} Precursor Demonstration Guidance**
 - EPA is considering comments on November 2016 version of draft guidance that recommended technical approaches for precursor demonstrations to assess whether a particular precursor contributes significantly to exceedances of the NAAQS in a given area
 - States have been submitting and EPA has taken or is considering action on precursor demonstrations that states have developed using the draft guidance



More on first bullet:

EPA received NOI in January 2019 from environmental groups for not issuing FFS for Salt Lake City and Provo, UT for 2006 Serious area plans

EPA received separate complaint from different enviro groups for not issuing FFS for overdue Fairbanks, AK for 2006 NAAQS Serious area plan

Regional offices continue to work with states as they work on developing approvable plans, and we continue to look for opportunities to issue Clean Data Determinations and to redesignate areas that qualify.

More on second bullet:

Consistent with CAA section 189(e), the PM_{2.5} SIP Requirement Rule allows states to submit optional precursor demonstrations to show that emissions of a particular precursor do "not contribute significantly to PM_{2.5} levels which exceed the standard in the area."

If a precursor demonstration is approved for a particular nonattainment area, the attainment plan and/or NNSR program may exclude the precursor from certain control requirements, depending on the type of demonstration provided.

This guidance does not affect the precursor policies for PSD.

AQAD is leading development of PM_{2.5} Precursor Demonstration Guidance.

EPA approved precursor demonstrations for Oakridge, OR and proposed approval for Cleveland OH (2012 NAAQS).

Message

From: Steven Hamburg [shamburg@edf.org]
Sent: 12/16/2018 7:57:04 PM
To: Carpenter, Thomas [Carpenter.Thomas@epa.gov]; 'drlarrymonroe@gmail.com' [drlarrymonroe@gmail.com]; 'anne.smith@nera.com' [anne.smith@nera.com]
CC: Michael Honeycutt [Michael.honeycutt@tceq.texas.gov]; Brennan, Thomas [Brennan.Thomas@epa.gov]; Johnston, Khanna [Johnston.Khanna@epa.gov]; Matthew Welch [mwelch@edf.org]; lsmonroe9@gmail.com
Subject: RE: Biogenic Carbon Emissions Report - Review and comments
Attachments: Biogenic Carbon-8-29-18 12-16-18 edits.docx

Dear Colleagues,

My sincerest apologies for taking so long to get proposed revisions to the biogenic carbon Accounting Report to you. Attached is the revised report with all additional text highlighted. Jeanne VanBriesen prior to leaving the board very graciously put together a draft of the report with all of the comments and suggested changes. I used the version she prepared to address the requested/suggested edits. I believe I was able to address most of the them. In order to try to make the attached document readable it highlights all added text and any comments that I felt I was not able to deal with in a direct way. I would like to highlight the following issues:

- Overall took the approach that removing text was preferable to adding text given that the report has been approved subject to addressing concerns outlined. If there were statements that created confusion or required additional analyses to address and did not seem central to the overall recommendations I removed the text in question (generally a sentence and in a few cases a paragraph).
- Shifted several declarative statements to subjective.
- Tried to simplify language where there were comments reflecting confusion about the underlying message/conclusions.
- Worked to ensure that the material in the Executive Summary reflects what was said in the body of the report and the recommendations align with those in the main report in language and order (a few are shorter in the Exec Summary than in the body of the report – that seemed ok to me).
- Removed the two figures – there were several issues regarding how they were integrated in our report relative to the Panel report from which they were taken. We had discussed not including them in the original drafting of this report and the review comments indicated that would have been a better approach.
- There were numerous comments about the lack of detail regarding charge question 2. I retained comments regarding this issue, many from Larry. I am looking for advice on how to address. My concern is that we would have to create significant new material and analyses to fully address the concerns raised – neither of which seemed appropriate at this stage of the process.

Look forward to discussing this draft with everyone.

Cheers

Steve

From: Carpenter, Thomas <Carpenter.Thomas@epa.gov>
Sent: December 14, 2018 7:35 PM
To: Steven Hamburg <shamburg@edf.org>; 'drlarrymonroe@gmail.com' <drlarrymonroe@gmail.com>; 'anne.smith@nera.com' <anne.smith@nera.com>
Cc: Michael Honeycutt <Michael.honeycutt@tceq.texas.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>; Johnston, Khanna <Johnston.Khanna@epa.gov>; Matthew Welch <mwelch@edf.org>; lsmonroe9@gmail.com
Subject: RE: Biogenic Carbon Emissions Report - Review and comments

All,

We are wrapping up the Biogenic Carbon Emissions report and will email a revised document over the weekend. Thank you for your patience.

Tom

-----Original Appointment-----

From: Carpenter, Thomas

Sent: Friday, December 07, 2018 3:38 PM

To: Carpenter, Thomas; 'shamburg@edf.org'; 'drlarrymonroe@gmail.com'; 'anne.smith@nera.com'

Cc: 'Michael Honeycutt (Michael.honeycutt@tceq.texas.gov)'; Brennan, Thomas; Johnston, Khanna; 'Matthew Welch'; lsmmonroe9@gmail.com

Subject: Biogenic Carbon Emissions Report - Review and comments

When: Monday, December 17, 2018 9:00 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: Teleconference

Call in Ex. 6 Personal Privacy
Conf Code Ex. 6 Personal Privacy

From: Carpenter, Thomas

Sent: Friday, December 07, 2018 3:33 PM

To: 'shamburg@edf.org' <shamburg@edf.org>; 'drlarrymonroe@gmail.com' <drlarrymonroe@gmail.com>; 'anne.smith@nera.com' <anne.smith@nera.com>

Cc: Michael Honeycutt (Michael.honeycutt@tceq.texas.gov) <Michael.honeycutt@tceq.texas.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>; Johnston, Khanna <Johnston.Khanna@epa.gov>; Matthew Welch <mwelch@edf.org>

Subject: Biogenic Carbon Emissions Report - Review and comments

Greetings,

Thank you for sending in your availability. I would like to book two sessions in case we need the extra time. I also want to get this report finalized. Dr Hamburg and I will send along the Report as soon as we can for your review. If you have time to provide any comments or suggestions by 12/13 please copy the group to facilitate our preparations.

Hopefully we can give some time back to folks on the 19th.

Mon – 12/17 9-10 AM EST

Initial Discussion of Quality Review revisions to report

Identify and changes or additional language

Set schedule for posting and sending to the Administrator

Wed – 12/19 12-1 PM EST

Continue if needed.

This e-mail and any attachments may contain confidential and privileged information. If you are not the intended recipient, please notify the sender immediately by return e-mail, delete this e-mail and destroy any copies. Any dissemination or use of this information by a person other than the intended recipient is unauthorized and may be illegal.

Message

From: Carpenter, Thomas [Carpenter.Thomas@epa.gov]
Sent: 12/19/2018 9:34:14 PM
To: 'shamburg@edf.org' [shamburg@edf.org]; 'drlarrymonroe@gmail.com' [drlarrymonroe@gmail.com]; 'anne.smith@nera.com' [anne.smith@nera.com]
CC: Michael Honeycutt [Michael.honeycutt@tceq.texas.gov]; Brennan, Thomas [Brennan.Thomas@epa.gov]; Johnston, Khanna [Johnston.Khanna@epa.gov]
Subject: RE: Biogenic Carbon Emissions Report - Review and comments
Attachments: Biogenic Carbon-telecon 12192019.docx

All,

Thank you for another very productive call today and being able to stay on a little longer.

Attached are the edits I captured from today's call. They are on TOP off the version Larry mailed at 11:00 am today.

Please review the changes and email to all any concerns and later than 1/4/2019. The SAB Staff Office will then conduct final proofing/formatting review to finalize the report by the middle of January.

I will be checking in over the holidays and responding to emails.

Thank you once again for all your great work in finalizing the report.

Happy Holidays to you and yours!

Best

Tom

-----Original Appointment-----

From: Carpenter, Thomas
Sent: Friday, December 07, 2018 3:39 PM
To: Carpenter, Thomas; 'shamburg@edf.org'; 'drlarrymonroe@gmail.com'; 'anne.smith@nera.com'
Cc: 'Michael Honeycutt (Michael.honeycutt@tceq.texas.gov)'; Brennan, Thomas; Johnston, Khanna; 'Matthew Welch'; lsmonroe9@gmail.com
Subject: Biogenic Carbon Emissions Report - Review and comments
When: Wednesday, December 19, 2018 12:00 PM-1:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Teleconference

Call in Code **Ex. 6 Personal Privacy**

From: Carpenter, Thomas
Sent: Friday, December 07, 2018 3:33 PM
To: 'shamburg@edf.org' <shamburg@edf.org>; 'drlarrymonroe@gmail.com' <drlarrymonroe@gmail.com>; 'anne.smith@nera.com' <anne.smith@nera.com>
Cc: Michael Honeycutt (Michael.honeycutt@tceq.texas.gov) <Michael.honeycutt@tceq.texas.gov>; Brennan, Thomas <Brennan.Thomas@epa.gov>; Johnston, Khanna <Johnston.Khanna@epa.gov>; Matthew Welch <mwelch@edf.org>
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